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ALBANY, N. Y.

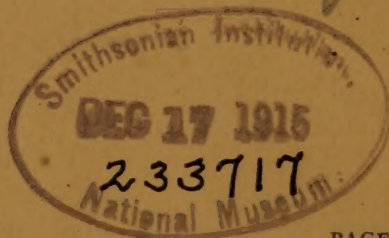
DECEMBER 15, 1915

New York State Museum

JOHN M. CLARKE, Director

Museum Bulletin 179

REPORT OF THE STATE BOTANIST 1914



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ALBANY

THE UNIVERSITY OF THE STATE OF NEW YORK

1915

THE UNIVERSITY OF THE STATE OF NEW YORK

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The University of the State of New York

Science Department, June 14, 1915

Dr John H. Finley

President of the University

SIR:

I beg to transmit to you herewith the annual report of the State Botanist for the fiscal year 1914 and to recommend this for publication as a bulletin of the State Museum.

Very respectfully

JOHN M. CLARKE

Director

THE UNIVERSITY OF THE STATE OF NEW YORK
OFFICE OF THE PRESIDENT

Approved for publication this 17th day of June 1915

A handwritten signature in dark ink, appearing to read "John H. Finley". The signature is written in a cursive style with a long horizontal stroke at the end.

President of the University

University of the State of New York Bulletin

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DECEMBER 15, 1915

New York State Museum

JOHN M. CLARKE, Director

Museum Bulletin 179

REPORT OF THE STATE BOTANIST 1914

John M. Clarke

Director, Science Department

SIR:

I beg to communicate herewith my report on the work of the State Botanist for the fiscal year 1914.

Very respectfully

HOMER D. HOUSE

Acting State Botanist

Noteworthy contributions. The most important addition to the State herbarium during the past year is the gift by Professor Charles S. Sheldon of Oswego, of his entire herbarium, numbering over 15,000 specimens. Professor Sheldon's collection contains specimens from every state of the union as well as from Mexico, Canada and several European countries. The New York State collections, made chiefly by Professor Sheldon between the years 1877 and 1895, alone number 1020 specimens. A more detailed account of this collection will be found in another place.

Mr Simon Davis of Brookline, Mass., presented the herbarium with a collection of 60 species of fungi native of the eastern United States. A large number of interesting flowering plants and fungi have also been received from Dr W. Haydon of Marshfield, Ore.

Scientific investigations. The limited amount of time available for field work was spent chiefly in a reconnaissance of the vegetation and its ecological relations, about the eastern end of Oneida lake, a region of extensive sandy barrens, swamps and bogs, in addition to the interesting vegetation of the shores and shallow

waters. This study, it is hoped, will be brought to a close during the season of 1915. Observations were also made upon the vegetation of several of the sphagnum bogs of central New York. It is highly desirable that these observations be brought together in a formal way at some future time. New localities for certain rare species are reported under "Notes on Local Floras" and "New or Interesting Species of Fungi."

Exchanges. It has been found desirable to distribute as exchanges many of the duplicate fungi and flowering plants of the herbarium, thus enriching our collections and making available much valuable space heretofore occupied by the stored material. Exchanges have been effected with Mr G. Newodowski of Kiev, Russia, from whom the herbarium has received a valuable collection of fungi, chiefly parasitic leaf forms, native of eastern Europe and the Russian Caucasus. From Brother Victorin, of Longueuil, Quebec, has been received in exchange a large collection of flowering plants representing the flora of our northern border.

Condition of the collections. Further progress has been made in the arrangement of the herbarium and with minor exceptions the collections are now in permanent form. Although there is on hand considerable material stored away in more or less inaccessible bundles, nevertheless practically all the valuable material has now been labeled and placed in proper sequence in the herbarium and thus made available for study. This has resulted in a great increase in the value of the herbarium for purposes of scientific research and is correspondingly appreciable to the numerous botanists who have had occasion to consult the collections during the past year.

Additions to the herbarium. The number of specimens of New York State species which have been added to the herbarium from current collections during the past year is 675, from contributions 336, from the Sheldon herbarium 1020; a total of 2031 specimens. Of the total number of specimens received, 112 were new to the herbarium and 19 species are described as new to science. The extralimital specimens of the Sheldon herbarium number 13,382.

The number of those who have contributed specimens is 33. This includes those who have sent specimens merely for identification and which were desirable additions to the herbarium.

Identifications. The number of identifications made of specimens sent or brought to the office by inquirers is 556. The number of persons for whom these identifications were made was 151.

PLANTS ADDED TO THE HERBARIUM

New to the herbarium

- | | |
|---|---|
| <i>Aecidium lampsanicolum</i> <i>Tranzsch.</i> | <i>Lactaria obnubilis</i> <i>Lasch.</i> |
| “ <i>lini</i> <i>Dearness & House</i> | <i>Leptosphaeria houseana</i> <i>Sacc.</i> |
| <i>Apargia hispida</i> (L.) <i>Willd.</i> | <i>Macrophoma peckiana</i> <i>Dearness & House</i> |
| <i>Ascochyta clematidina</i> <i>Thümen.</i> | <i>Melampsora helicospicaria</i> (Pers.) <i>Cast.</i> |
| <i>Asterina leemingii</i> E. & E. | “ <i>klebahni</i> <i>Bubak</i> |
| <i>Asteroma ribicolum</i> E. & E. | “ <i>laricis-epitea</i> <i>Kleb.</i> |
| <i>Ballota nigra</i> <i>Linn.</i> | <i>Melampsorella symphyti</i> (DC.) <i>Bubak</i> |
| <i>Borago officinalis</i> <i>Linn.</i> | <i>Melanoleuca subpressundata</i> <i>Murrill</i> |
| <i>Bolbitis variicolor</i> <i>Atkinson</i> | <i>Micropeltis pitya</i> <i>Sacc.</i> |
| <i>Botryosphaeria berengeriana</i> var. <i>weligiae</i> <i>Rehm</i> | <i>Myriophyllum farwellii</i> <i>Morong</i> |
| <i>Carex incompta</i> <i>Bicknell</i> | <i>Nothomyces nigricans</i> <i>Sacc.</i> |
| <i>Campanula trachelium</i> <i>Linn.</i> | <i>Phoma houseana</i> <i>Sacc.</i> |
| <i>Cercospora teucii</i> E. & K. | <i>Phomopsis daturae</i> (R. & F.) <i>Sacc.</i> |
| “ <i>argychniae</i> <i>Dearness & House</i> | “ <i>viticola</i> <i>Sacc.</i> |
| “ <i>namae</i> <i>Dearness & House</i> | <i>Phyllosticta baccharidis</i> <i>Dearness & House</i> |
| <i>Chaenorrhinum minus</i> (L.) <i>Lange</i> | “ <i>chenopodii</i> <i>Sacc.</i> |
| <i>Chamaesycis humistrata</i> (Engelm.) <i>Small</i> | “ <i>galactis</i> (Cooke) E. & E. |
| <i>Cleome spinosa</i> <i>Linn.</i> | “ <i>maurandiae</i> <i>Dearness & House</i> |
| <i>Coleosporium euphrasiae</i> (Schum.) <i>Wint.</i> | “ <i>medeolae</i> <i>Dearness & House</i> |
| “ <i>tussilaginis</i> (Pers.) <i>Lev.</i> | “ <i>nyssae</i> <i>Cooke</i> <i>House</i> |
| <i>Coniophora arida</i> (Fr.) <i>Cooke</i> | “ <i>oakesiae</i> <i>Dearness & House</i> |
| <i>Coniosporium lumulosum</i> <i>Sacc.</i> | “ <i>orobella</i> <i>Sacc.</i> |
| <i>Coronilla coronata</i> <i>Linn.</i> | “ <i>pachysandrae</i> <i>Dearness & House</i> |
| <i>Cucurbitaria caraganae</i> <i>Karst.</i> | “ <i>rhaxiae</i> <i>Dearness & House</i> |
| “ <i>elongata</i> (Fr.) <i>Grev.</i> | <i>Placosphaeria campanulae</i> (DC.) <i>Bäuml.</i> |
| <i>Curreya peckiana</i> <i>Sacc.</i> | “ <i>celtidis</i> <i>Dearness & House</i> |
| <i>Cylindrocolla urticae</i> (Pers.) <i>Bon.</i> | “ <i>stellatarum</i> <i>Sacc.</i> |
| <i>Cylindrosporium spigeliae</i> <i>Dearness & House</i> | <i>Pleuodomus destruens</i> <i>Harter</i> |
| <i>Cytospora phomopsis</i> <i>Sacc.</i> | <i>Potentilla monspeliensis</i> <i>Linn.</i> |
| <i>Elscholtzia cristata</i> <i>Willd.</i> | <i>Puccinia acrophila</i> <i>Sydow</i> |
| <i>Dendrophoma phyllogena</i> <i>Sacc.</i> | “ <i>annularis</i> (Strauss) <i>Wint.</i> |
| <i>Eutypella stefansa</i> (Pers.) <i>Rehm.</i> | “ <i>bardanae</i> <i>Corda</i> |
| <i>Glycyrrhiza lepidota</i> <i>Pursh</i> | “ <i>baryi</i> (Berk. & Br.) <i>Wint.</i> |
| <i>Graphiothecium phyllogenum</i> (Desm.) <i>Sacc.</i> | “ <i>coronifera</i> <i>Kleb.</i> |
| <i>Gymnopilus permollis</i> <i>Murrill</i> | |
| “ <i>subviridis</i> <i>Murrill</i> | |
| <i>Harpographium magnum</i> <i>Sacc.</i> | |
| <i>Hieracium pratense</i> <i>Tausch.</i> | |
| <i>Laestadia galactina</i> <i>Dearness & House</i> | |

- Puccinia herniariae* Unger
 " *junci* (Strauss) Wint.
 " *oreoselini* (Strauss) Körn.
 " *simplex* (Körn.) Erikss. & Henn.
 " *smilacearum-digraphidis* Kleb.
 " *tanacetii* DC.
 " *tragopogonis* (Pers.) Corda
Pucciniasturm articum (Lagerh.) Tranz.
Ramularia delphinii Dearness & House
Rhabdospora clarkeana Sacc.
Richardia scabra Linn. f.
Rubus vermontanus Blanchard
Septoria breviuscula Sacc.
 " *cydoniae* Fckl.
 " *darlingtoniae* Dearness & House
 " *erythraeae* Dearness & House
 " *lobeliae* Pk. var. *lobeliae-inflatae* Sacc.
Septoria tinctoria Dearness & House
 " *trautvetteriae* E. & E.
Sphaerella populnea Sacc.
Sphaeropsis visci (Sollm.) Sacc.
 " *peckiana* Dearness & House
Sporodesmium mucosum Sacc.
 " *pilulare* Sacc.
Stagonosporopsis haloxyli H. Sydow
Stipa comata Trin. & Rupr.
Thyridium ceanothi Dearness & House
Urocystis agropyri (Preuss) Schroet.
Uromyces fulgens Bubak
 " *glycyrrhizae* (Rabenh.) P. Magn.
 " *heliotropii* Svedinski
 " *salsolae* Reichardt
 " *scutellatus* (Rabenh.) P. Magn.
Viola fimbriatula x *septentrionalis* Brainerd
 " " x *sororia* Brainerd
 " *incognita* var. *forbesii* Brainerd
Venturia gaultheriae Ell. & Ev.

Not new to the herbarium

- Aecidium clematidis* DC.
 " *euphorbiae* Gmel.
 " *frangulae* Schum.
 " *rubellum* Gmel.
 " *houstoniatum* Schw.
 " *urticae* (Schum.) Rabenh.
 " *violae* Schw.
Agrostis maritima Lam.
 " *perennans* (Walt.) Tuckerm.
Alnus mollis Fernald
Amanita velatipes Atkinson
Amelanchier canadensis (L.) Medic.
 " *intermedia* Spach
 " *laevis* Wiegand
 " *sanguinea* (Pursh) DC.
Ammodenia peploides (L.) Rupr.
Anemone riparia Fernald
Apocynum androsaemifolium Linn.
 " *sibiricum* Jacq.
Arabis brachycarpa (T. & G.) Britton
Arenaria serpyllifolia Linn.
Argentina anserina (L.) Rydb.
Aristolochia clematidis Linn.
Aronia nigra (Willd.) Britton
Asterina gaultheriae M. A. Curtis
Artemisia stelleriana Bess.
Athyrium acrostichoides (Sw.) Diels
 " *pyncocarpon* (Michx.) Tidestrom
Bartonia virginica (L.) B.S.P.
Batrachium trichophyllum (A. Gray) Bosch
Blephariglottis blephariglottis (Willd.) Rydb.
 " *ciliaris* (L.) Rydb.
Boehmeria cylindrica (L.) Sw.
Boletus aureus Linn.
Boletinus cavipes (Opat.) Kalchb.
Botrychium dissectum Spreng.
 " *neglectum* Wood
 " *obliquum* oneidense Gilbert
Botryosphaeria quercuum (Schw.) Sacc.
Cakile edentula (Bigel.) Hook.
Callitriche heterophylla Pursh
Campanula aparinoides Pursh

<i>Camptosorus rhizophyllus</i> (L.) Link	<i>Ceratomyces communis</i> (Bull.)
<i>Carex abacta</i> Bailey	Murrill
" <i>arctata</i> Boott	" <i>retipes</i> (B. & C.)
" <i>atratifomis</i> Britton	Murrill
" <i>aurea</i> Nuttall	" <i>scaber</i> (Bull.) Murrill
" <i>cristatella</i> Britton	" <i>subtomentosus</i> (L.)
" <i>disperma</i> Dewey	Murrill
" <i>eburnea</i> Boott	<i>Cetraria islandica</i> (L.) Ash.
" <i>exilis</i> Dewey	<i>Chlorosplenium aeruginascens</i> (Nye)
" <i>flava</i> Linn.	Karst.
" <i>folliculata</i> Linn.	<i>Chiogenes hispidula</i> (L.) T. & G.
" <i>glareosa</i> Wahl.	<i>Cintractia caricis</i> (Pers.) Magn.
" <i>gracillima</i> Schw.	<i>Cladosporium fulvum</i> Cooke
" <i>howei</i> Mackenzie	<i>Coeloglossum bracteatum</i> (Willd.)
" <i>hystricina</i> Muhl.	Parl.
" <i>intumescens</i> Rudge	<i>Coelopleurum actaeifolium</i> (Michx.)
" <i>lanuginosa</i> Michx.	C. & R.
" <i>leersii</i> Willd.	<i>Comarum palustre</i> Linn.
" <i>leptalea</i> Wahl.	<i>Clitocybe brumealis</i> Fries
" <i>limosa</i> Linn.	" <i>clavipes</i> (Pers.) Fries
" <i>lupulina</i> Muhl.	" <i>compressipes</i> Peck
" <i>maritima</i> O. F. Mueller	" <i>inversa</i> Scop.
" <i>muhlenbergii</i> Schk.	" <i>sudorifica</i> Peck
" <i>pennsylvanica</i> Lam.	<i>Collybia butyracea</i> (Bull.) Fries
" <i>pennsylvanica</i> Lam.	" <i>dryophila</i> (Bull.) Fries
" <i>plantaginea</i> Lam.	" <i>lentioides</i> Peck
" <i>prasina</i> Wahl.	" <i>platyphylla</i> Fries
" <i>pseudo-cyperus</i> Linn.	" <i>radicata</i> (Relh.) Fries
" <i>squarrosa</i> Linn.	" <i>striatipes</i> Peck
" <i>stipitata</i> Muhl.	" <i>strictipes</i> Peck
" <i>swanii</i> (Fern.) Mackenzie	" <i>velutipes</i> (Curt.) Fries
" <i>torta</i> Boott	<i>Corallorhiza maculata</i> Raf.
" <i>tribuloides</i> Wahl.	<i>Corticium investiens</i> (Schw.) Bres.
" <i>tuckermanni</i> Dewey	" <i>mutatum</i> Peck
" <i>trisperma</i> Dewey	<i>Cornus alternifolia</i> Linn. f.
" <i>vesicaria</i> Linn.	<i>Cortinarius castaneus</i> (Bull.) Fries
<i>Cassia marylandica</i> Linn.	" <i>cinnabarinus</i> Fries
<i>Castilleja acuminata</i> (Pursh) Spreng.	" <i>cinnamoneus</i> (L.) Fries
<i>Celtis occidentalis</i> Linn.	" <i>collintius</i> Fries
<i>Cenangium populneum</i> (Pers.) Rehm.	" <i>distans</i> Peck
<i>Cenchrus carolinianus</i> Walt.	<i>Cortinellus rutilans</i> (Schaeff.) P.
<i>Centaurea masculosa</i> Lam.	Karst.
<i>Centaurium centaurium</i> (L.) W. F. Wight	<i>Crepidotus fulvotomentosus</i> Peck
<i>Cercospora callae</i> Peck	<i>Criosanthes arietina</i> (L.) House
" <i>absinthii</i> (Pk.) Sacc.	<i>Crocanthemum canadense</i> (L.) Britton
" <i>comari</i> Peck	
" <i>dubia</i> Wint.	<i>Cronartium ribicolum</i> Dietr.
<i>Ceratomyces auriflammeus</i> (B. & C.) Murrill	<i>Cryptogramma stelleri</i> (Gmel.)
" <i>bicolor</i> (Peck) Murrill	Prantl.
	<i>Cryptotaenia canadensis</i> (L.) DC.
	<i>Cyperus engelmanni</i> Steud.

- Cyperus filiculmis* Vahl
 " *inflexus* Muhl.
Cythraea bulbosa (L.) House
Cytospora leucostoma Sacc.
Deconica bryophila Peck
Dianthera americana Linn.
Discosia maculicola Gerard
Diatrypella betulina (Peck) Sacc.
Dimerosporium balsamicola (Peck)
 E. & E.
Dothidea sambuci (Pers.) Fr.
Dothidella junci (Fr.) Sacc.
Draba arabisans Michx.
Drosera longifolia Linn.
Dryopteris dryopteris (L.) Britton
 " *goldiana* (Hook) A. Gray
 " *clintoniana* (D. C. Eaton)
 Dowell
 " *dilatata* (Hoffm.) A. Gray
 " *intermedia* (Muhl.) A.
 Gray
Eccilia flavida Peck
 " *subacus* Peck
 " *watsoni* Peck
Elymus arenarius Linn.
 " *australis* Scribn. & Ball.
Empetrum nigrum Linn.
Epilobium lineare Muhl.
Entoloma cuspidatum Peck
 " *modestum* Peck
 " *nidosum* Fries
 " *rhodopolium* (Bolt.) Fries
 " *salmonium* Peck
 " *sinuatum* (Pers.) Fries
 " *strictius* Peck
Equisetum fluviale Linn.
 " *hyemale* intermedium
 A. A. Eaton
Eriophorum alpinum Linn.
 " *angustifolium* Roth.
 " *callitrix* Cham.
 " *gracile* Koch
 " *viridi-carinatum*
 (Engelm.) Fern.
 " *virginicum* Linn.
Eutypella macluræ (Ell. & Ev.)
 Ell.
Exoascus cerasi Fckl.
 " *insititiae* Sadebeck
 " *pruni* Fckl.
Fomes fraxinophilus (Peck) Sacc.
Fuscoporia ferruginea (Schröd.)
 Murrill
Galera hypnorum (Batsch.) Fries
 " *laterita* Fries
 " *tenera* Fries
Galium labradoricum Wiegand
Geum macrophyllum Willd.
 " *rivale* Linn.
Glenospora melioloides Curt.
Gloeosporium coryli (Desm.) Sacc.
 " *hepaticae* Peck
 " *sassafras* (Cooke)
 E. & K.
Gnomonia petiolophila (Peck) Berl
 & Vogl.
Godronia Cassandrae Peck
Gymnadenopsis clavellata (Michx.)
 Rydb.
Gymnoconia interstitialis (Schlecht.)
 Lagh.
Gymnopilus flavida (Schaeff.)
 Murrill
 " *sapinea* (Fries.) Murrill
 " *spumosa* (Fries) Murrill
 " *squalida* (Peck) Murrill
Halenia deflexa (J. E. Sm.) Griseb.
Halerpestes cymbalaria (Pursh)
 Greene
Hapalopilus rutilans (Pers.) Murrill
Hebeloma discomorbidum Peck
 " *parvifruitum* Peck
 " *pascuens* Peck
Hibiscus moscheutos Linn.
Hieracium pilosella Linn.
Hierochloa odorata (L.) Wahl.
Hydnum adustum Schw.
 " *ochraceum* Pers.
Hydrastis canadensis Linn.
Hydrophyllum virginianum Linn.
Hymenochaete agglutinosa Ellis
Hymenula galii Peck
Hypericum ellipticum Hook.
 " *majus* (A. Gray) Britton
Hypholoma appendiculatum
 " *candolleianum* Fries
 " *delineatum* Peck
 " *rufocephalum* Atkinson
 " *fasciculare* (Huds.)
 Quel.
Hypocrea richardsonii B. & M.

- Hygrophorus conicus* (Scop.) Fries
 " *puniceus* Fries
Hysterium prostii Duby
Ibidium beckii (Lindl.) House
 " *gracile* (Bigel.) House
 " *plantagineum* (Raf.) House
Ilysanthes dubia (L.) Barnhart
Inonotus radiatus (Sow.) Karst.
Irpex fuscescens Schw.
Irpiciporus lacteus (Schw.) Murrill
Isotria verticillata (Willd.) Raf.
Juncus balticus var. *littoralis* Engelm.
 " *brevicaudatus* (Engelm.)
 Fernald
Juniperus horizontalis Moench
 " *sibirica* Burgsd.
Kalmia polifolia Wang.
Lactaria desceptiva Peck
 " *grisea* Peck
 " *hygrophoroides* B. & C.
 " *lignyota* Fries
 " *oculata* (Peck) Burlingham
Lathyrus maritimus (L.) Bigel.
 " *myrtifolius* Muhl.
Lentinus haematopus Berk.
Leontodon hispidus Linn.
Lepargyrea canadensis (L.) Greene
Lepiota americana Peck
 " *metulaespora* B. & Br.
Leptasea aizoides (L.) Haw.
Leptonia serrulata (Pers.) Fries
 " *subserulata* Peck
Leptosphaeria doliolum (Pers.) De
 Not.
Leptothyrium periclymeum (Desm.)
 Sacc.
Ligusticum scothicum Linn.
Limodorum tuberosum Linn.
Limonium carolinianum (Walt.)
 Britton
Limnorchis hyperborea (L.) Rydb.
Liparis loeselii (L.) Richard.
Lobelia kalmii Linn.
Lonicera hirsuta Eaton
 " *oblongifolia* (Goldie) Hook.
Lophodermium pinastri (Schrad.)
 Cher.
Lychnis flos-cuculi Linn.
Lycopodium annotinum Linn.
 " *inundatum* Linn.
 " *tristachyum* Pursh
Lysias hookeri (Torr.) Rydb.
 " *marcophylla* (Goldie) House
 " *orbiculata* (Pursh) Rydb.
Lysiella obtusata (Pursh) Rydb.
Lysimachia punctata Linn.
 " *vulgaris* Linn.
Lythrum salicaria Linn.
Marasmius elongatipes Peck
 " *tomentosipes* Peck
Mariscus mariscoides (Muhl.)
 Kuntze
Marsonia juglandis (Lib.) Sacc.
Melanoleuca sejuncta (Sow.) Murrill
 " *transmutans* (Peck)
 Murrill
 " *terraeolens* (Peck)
 Murrill
Melampsora larici-populini Kleb.
 " *lini* (Pers.) Desm.
 " *vacciniorum* Link.
Melampsoropsis cassandrae (P. &
 C.) Arthur
Melogramma bulliardi Tul.
Mertensia maritima (L.) S. F. Gray
Microsphaeria divaricata (Wallr.)
 Lev.
Moneses uniflora (L.) A. Gray
Montia lamprosperma Cham.
Naematelia atrata Peck
Naias flexilis (Willd.) Rost. & Sch.
Naucoria autumnalis Peck
 " *christinae* Fries
 " *firma* Peck
 " *sphagnophila* Peck
 " *vernalis* Peck
Nolanea conica Peck
Nymphaea rubrodisca (Morong)
 Greene
 " *variegata* (Engelm.)
 G. S. Miller
Nyssa sylvatica Marsh.
Ophrys australis (Lindl.) House
 " *convallarioides* (Sw.)
 W. F. Wight
 " *cordata* Linn.
Oryzopsis racemosa (Sm.) Ricker
Oxybaphus hirsutus (Pursh) Sweet
Panicum columbianum Scribn.
 " *meridionale* Ashe

- Paxillus atrotomentosus* (Batsch.) Fries
Parnassia caroliniana Michx.
Paspalum muhlenbergii Nash
Pedicularis palustris Linn.
Pellaea atropurpurea (L.) Link
Peniophora cinerea (Fries) Cooke
Peridermium cerebrum Peck
 " *comptoniae* (Arthur) Orton & Adams
Persicaria amphibia (L.) S. F. Gray
Peronospora effusa (Grev.) Rabenh.
 " *ficariae* Tul.
 " *viciae* (Berk.) De Bary
Phaeolus sistotremoides (Alb. & Schw.) Murrill
Phragmidium subcorticium (Schränk) Wint.
Phyllachora ulmi (Dur.) Fckl.
Phyllitis scolopendrium (L.) Hoffm.
Phyllosticta asiminae E. & K.
 " *lantanoidis* Peck
 " *pirina* Sacc.
 " *tumoricola* Peck
 " *cruenta* (Fr.) Kickx.
Plantago aristata Michx.
 " *borealis* Lange
 " *decipiens* Barneous
Plasmopara nivea Schroet.
 " *viticola* (B. & C.) Berlese & De Toni
Plicatura faginea (Schräd.) P. Karst.
Pluteolus callistus Peck
Poa eminens J. S. Presl.
Podosphaeria oxycanthae (DC.) De Bary
 " *tridoctyla* (Wallr.) De Bary
Pogonia ophioglossoides Linn.
Polemonium vanbruntiae Britton
Poria attenuata Peck
Polygala pauciflora Willd.
 " *viridescens* Linn.
Potentilla pennsylvanica Linn.
 " *recta* Linn.
Primula farinosa var. *macropoda* Fernald
 " *mistassinica* Michx.
Propolis faginea (Schräd.)
- Prunus cuneata* Raf.
Pseudomanus tumefaciens E. Sm. & Town.
Puccinastrum pyrolae (Pers.) Dietel
Puccinella angustata (R. Br.) Rand & Redfield
Puccinia aegopodii (Schum.) Link
 " *anemonies-virginianae* Schw.
 " *arenariae* (Schum.) Schroet
 " *bromina* Erikss.
 " *coronata* Corda
 " *emaculata* Schw.
 " *galii* (Pers.) Schw.
 " *lampsanae* (Schultz) Fckl.
 " *menthae* Pers.
 " *polygoni-amphibii* Pers.
 " *phragmitis* (Schum.) Körn.
 " *spergulae* DC.
 " *triticina* Erikss.
Pryola secunda Linn.
 " *uliginosa* Torrey
Pyxidanthera barbulata Michx.
Ranunculus septentrionalis Poir.
Ramularia tulasnei Sacc.
 " *obovata* Fckl.
Rhamnus alnifolia L'Her.
Rhexia virginica Linn.
Rhodiola rosea Linn.
Rhytisma ilicis-canadensis Schw.
Rosellinia glandiformis Ell. & Ev.
 " *aquilina* (Fr.) De Not.
 " *ligniaria* (Grev.) Nits.
 " *nutans* (C. & P.) Sacc.
 " *subiculata* (Schw.) Sacc.
Rostkovites subaureus (Peck) Murrill
Rubus hispidus Linn.
 " *setosus* Bigel.
 " *triflorus* Rich.
Russula foetens (Pers.) Fries
 " *lutea* (Huds.) Fries
 " *modesta* Peck
 " *ochrophylla* Peck
 " *variata* Banning
Sagina nodosa (L.) Fenzl.
Salicornia europea L. var. *prostrata* (Pall.) Fern.

- Salix balsamifera* Barrett
 candida Fluegge
 lucida Muhl.
 petiolaris J. E. Smith
 sericea Marsh.
Sanguisorba canadensis Linn.
Saururus cernuus Linn.
Schizonella melanogramma (DC.) Schroet.
Schmaltzia crenata (Mill.) Greene
Scirpus cyperinus (L.) Kunth
 americanus Pers.
 clintonii A. Gray
 paludosus A. Nelson
 rufus (Huds.) Schrad.
 rubrotinctus Fernald.
 validus Vahl
Scirrhia rimosa (A. & S.) Fckl.
Scrophularia leporella Bicknell
Sebacina pallida (Schw.) Burt
Senecio discoideus (Hook.) Britton
 pauperculus Michx.
 pseudo-arnica Less.
Septoria cornicola Desm.
 dalibardae Peck
 irregularis Peck
 ludwigiae Cooke
 poae-annuae Bres.
 podophyllina Peck
 polygalae P. & C.
 kalmiaecola (Schw.) B. & C.
 oenotherae West.
 ribis Desm.
 trillii Peck
 violae West.
 viridi-tingens Curtis
Serapias helleborine Linn.
Sibbaldiopsis tridentata (Ait.) Rydb.
Silene dichotoma Ehrh.
Solidago puberula Nutt.
 rugosa Mill.
 uliginosa Nutt.
Sparganium angustifolium Michx.
Spartina michauxiana Hitchc.
Sphacelotheca hydropiperis DeBary
Sphaerella colorata Peck
 gaultheriae C. & P.
Sphaerotheca castagnei Lev.
- Sporocybe azaleae* (Peck) Sacc.
Stachys aspera Michx.
Steironema ciliata (L.) Raf.
Stellaria borealis Bigel.
 humifusa Rottb.
 longifolia Muhl.
Stoisima cornuta (Michx.) Raf.
Stropharia stercoraria Fries
 semiglobata Batsch.
Streptopus roseus Michx.
Streptothrix fusca Corda
Suillellus frostii (Russell) Murrill
 luridus (Schaeff.) Murrill
Taphrina rhizophora Johan.
Thelephora pedicellata Schw.
 terrestris Ehrh.
Tilletia tritici (Bjerk.) Wint.
Tissa canadensis (Pers.) Britton
Trematosphaeria nuclearia (De Not) Sacc.
Triglochin maritima Linn.
 palustris Linn.
Triosteum aurantiacum Bicknell
Trillium cernuum Linn.
Trisetum spicatum (L.) Richter
Tubaria furfuracea Pers.
Urocystis anemones (Pers.) Schroet.
Uromyces caladii (Schw.) Farlow
 fabae (Pers.) De Bary
 ficariae (Schum.) Lev.
 dactylidis Otth.
 geranii (DC.) Otth. & Wartm.
 minor Schroet.
 psi (Pers.) De Bary
 rumicis (Schum.) Winter
 scrophulariae (Schum.) B. & Br.
Ustilago longissima (Sow.) Tul.
Utricularia intermedia Hayne
 macrorrhiza LeConte
Vaccinium angustifolium Ait.
 atrococcum (A. Gray) Heller
 corymbosum Linn.
 pennsylvanicum Lam.
Vagnera trifolia (L.) Morong
Valeriana uliginosa (Torr. & Gray) Rydb.

<i>Valsa leucostoma</i> (Pers.) Fries	<i>Viola septentrionalis</i> Greene
" <i>brevis</i> Peck	" <i>sororia</i> Willd.
<i>Veratrum viride</i> Ait.	<i>Vitis-idaea vitis-idaea</i> (L.) Britton
<i>Vermicularia hepatica</i> Peck	<i>Waldsteinia fragarioides</i> (Michx.)
" <i>coptina</i> Peck	Tratt.
" <i>peckii</i> Sacc.	<i>Washingtonia claytoni</i> (Michx.)
<i>Veronica chamaedrys</i> Linn.	Britton
<i>Viola incognita</i> Brainerd	<i>Zannichella palustris</i> Linn.
" <i>rotundifolia</i> Michx.	<i>Zizia aurea</i> (L.) Koch
" <i>selkirkii</i> Goldie	<i>Zostera marina</i> Linn.

CONTRIBUTORS AND THEIR CONTRIBUTIONS

Frank H. Ames, Brooklyn

<i>Entoloma sinuatum</i> Fries	<i>Hypholoma candolleianum</i> Fries
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M. S. Baxter, Rochester

<i>Agrostis perennans</i> (Walt.) Tuckerm.	<i>Festuca elatior arundinacea</i> Celak
<i>Carex squarrosa</i> Linn.	<i>Oryzopsis racemosa</i> (Sm.) Richter
" <i>tuckermanni</i> Dewey	<i>Centaurea maculosa</i> Lam.
<i>Cyperus engelmanni</i> Steud.	<i>Scrophularia leporella</i> Bicknell
	<i>Paspalum muhlenbergii</i> Nash
	<i>Stipa comata</i> Trin. & Rupr.

Louis A. Blodgett, Schoharie

<i>Campanula trachelium</i> Linn.	<i>Polemonium van-bruntiae</i> Britton
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Rev. Charles W. Boyd, Tupper Lake

Clavaria ligula Fries

Miss Elizabeth L. Bradley, Troy

Aristolochia clematitis Linn.

Ezra Brainard, Middlebury, Vt.

<i>Rubus setosus</i> Bigel.	<i>Rubus vermontanus</i> Blanchard
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John N. Brown, Ogdensburg

<i>Lentinus lepideus</i> Fries	<i>Phaeolus sistotremoides</i> (A. & S.) Schw.
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S. H. Burnham, Hudson Falls

<i>Cetraria islandica</i> (L.) Ach.	<i>Trematosphaeria nuclearia</i> (De Not.) Sacc.
<i>Marasmius tomentosipes</i> Peck	

Miss M. C. Burns, Middleville

Lepiota americana Peck

J. H. Ten Eyck Burr, Cazenovia

Lactaria deceptiva Peck

Mrs Loomis Burrill, Little Falls

Serapias helleborine Linn.

Simon Davis, Brookline, Mass.

<i>Bolbitius variicolor</i> Atkinson	<i>Hebeloma discomorbidum</i> Peck
<i>Collybia butyracea</i> (Bull.) Fries	" <i>parvifructum</i> Peck
" <i>lentinoides</i> Peck	<i>Hygrophorus conicus</i> (Scop.) Fries
" <i>striatipes</i> Peck	<i>Hypholoma delineatum</i> Peck
" <i>strictipes</i> Peck	" <i>rugeocephalum</i> Atkinson
<i>Clitocybe brumalis</i> Fries	<i>Leptonia serrulata</i> (Pers.) Fries
" <i>compressipes</i> Peck	" <i>subserrulata</i> Peck
" <i>sudorifica</i> Peck	<i>Lepiota metulaespora</i> Berk. & Br.
<i>Cortinarius cinnabarinus</i> Fries	<i>Lactaria grisea</i> Peck
" <i>cinnamoneus</i> (L.) Fr.	" <i>lignyota</i> Fries
" <i>collinitus</i> Fries	<i>Marasmius varicosus</i> Fries
<i>Crepidotus fulvotomentosus</i> Peck	<i>Melanoleuca sejuncta</i> (Sow.) Murrill
<i>Deconica bryophila</i> Peck	" <i>terraeolens</i> (Peck)
<i>Eccilia flavida</i> Peck	Murrill
" <i>subacus</i> Peck	" <i>transmutans</i> (Peck)
" <i>watsoni</i> Peck	Murrill
<i>Entoloma cuspidatum</i> Peck	<i>Mycena alcalina</i> Fries
" <i>modestum</i> Peck	<i>Naucoria autumnalis</i> Peck
" <i>nidosum</i> Fries	" <i>firma</i> Peck
" <i>rhodopolium</i> (Bolt.) Fries	" <i>christinae</i> Fries
" <i>salmoneum</i> Peck	" <i>sphagnophila</i> Peck
" <i>sinuatum</i> (Pers.) Fries	" <i>tabacina bicolor</i> Peck
" <i>strictius</i> Peck	<i>Nolanea conica</i> Peck
<i>Flammula flavida</i> (Schaeff.) Fr.	<i>Paxillus atrotomentosus</i> (Batsch.)
" <i>spumosa</i> Fries	Fries
" <i>squalida</i> Peck	<i>Pholiota togularis</i> (Bull.) Kickx
<i>Galera hypnorum</i> (Batsch.) Fries	<i>Pluteolus expansus</i> Peck
" <i>laterita</i> Fries	" <i>callistus</i> Peck
" <i>sphagnorum</i> Pers.	<i>Psathyra helobina</i> Kalchbr.
" <i>tenera</i> Fries	<i>Sebacina pallida</i> (Schw.) Burt

John Dearness, London, Ontario

<i>Cladosporium fulvum</i> Cooke	<i>Melampsoropsis cassandrae</i> (P. & C.) Arthur
<i>Gymnosporangium juniperi-virginianae</i> Schw.	<i>Propolis faginea</i> (Schrad.) Karst.
<i>Hymenula galii</i> Peck	<i>Puccinia bardanae</i> Corda
<i>Marsonia juglandis</i> (Lib.) Sacc.	" <i>emaculata</i> Schw.
<i>Pucciniastrum arcticum</i> (Lagerh.) Trans.	

W. T. Doherty, Canille, Ariz.

<i>Fomes fraxinophilus</i> (Peck) Sacc.	<i>Peridermium cerebrum</i> Peck
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G. H. French, Carbondale, Ill.

<i>Coriolus prolificans</i> (Fr.) Murrill	<i>Hapalopilis rutilans</i> (Pers.) Murrill
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W. J. French, Syracuse

Hibiscus moscheutos Linn.

L. L. Harter, Washington, D. C.

Pleuodomus destruens Harter

Dr M. T. Hutton, Putnam Station

Lepiota naucinioides Peck

J. M. Van Hook, Bloomington, Ill.

Rosellina aquilia (Fries) De Not	"	nutans (C. & P.) Sacc.
" glandiformis Ell. & Ev.	"	palustris Schroet.
" ligniaria (Grev.) Nils.	"	pulveracea (Ehrh.) Fckl.
" medullaris (Wallr.) Ces.	"	subiculata (Schw.) Sacc.
& De Not.		

Dr W. Haydon, Marshfield, Ore.

Boletinus cavipes (Opat.) Kalchb.	Gymnopilus permollis Murrill
Argentina anserina (L.) Rydb.	Hosackia gracilis Dougl.
Baccharis pilularis DC.	Hygrophorus inmutans Murrill
Cantharellus cibarius Fries	Hypholoma fasciculare (Huds.)
Clitocybe clavipes (Pers.) Fries	Quel.
" inversa Scop.	Melanoleuca subpessundata Murrill
Cercospora absinthii (Peck) Sacc.	Opulaster cordatus Rydb.
Collybia velutipes (Curt.) Fries	Plantago purshii R. & B.
Darlingtonia californica Torrey	Stropharia stercoraria Fries
Fragaria chiloensis (L.) Duch.	Vancouveria hexandra (Hook.)
Gnaphalium chilense Spreng.	Morr. & Dec.

Jackson & Perkins, Newark

Pseudomonas tumefaciens E. Sm. & Town.

C. E. Jenny, Fresno, Calif.

Lenzites trabea Fries

Charles A. Mabie, Holley

Lentinus lepideus Fries

Miss M. McKenny, Olympia, Wash.

Gymnopilus subviridis Murrill

Miss A. G. Moore, Monroe

Craterellus cantharellus (Schum.) Fries

G. Newodowski, Kiev, Russia

Aecidium clematidis DC.	Aecidium lampanicolum Tranzschel
" euphorbiae Gmel.	" rubellum Gmel.
" frangulae Schum.	" urticae (Schum.) Rabent.

- Albugo candida* (Pers.) Kuntze
Botryosphaeria berengeriana var. *weigeliae* Rehm.
Cercospora dubia Wint.
Coleosporium euphrasiae (Schum.) Wint.
 " *tussilaginis* Pers.
Cronartium rubicolum Dietr.
Cucurbitaria caraganae Karst.
 " *elongata* (Fr.) Grev.
Cylindrocolla urticae (Pers.) Bon.
Erysiphe polygoni DC.
 " *tortilis* (Wallr.) Fr.
 " *umbelliferarum* DeBary
Eutypella macluriae (E. & E.) Ell.
 " *stefansa* (Pers.) Rehm.
Exoascus cerasi Fckl.
 " *insititiae* Sadebeck
 " *pruni* Fckl.
Graphiothecium *phyllogenum*
 (Desm.) Sacc.
Gymnosporangium juniperinum (L.) Fries
Leptosphaeria doliolum (Pers.) De Not.
Melampsora helioscopiae (Pers.) Cast
 " *larici-epitea* Kleb.
 " *larici-populini* Kleb.
 " *lini* (Pers.) Desm.
 " *klebahnii* Bubak
 " *vacciniorum* Link
Melampsorella symphyti (DC.) Bubak
Melogramma bulliardi Tul.
Microsphaeria divaricata (Wallr.) Lev.
Peronospora alta Fckl.
 " *effusa* (Grev.) Rabenh.
 " *ficariae* Tul.
 " *viciae* (Berk.) DeBary
Phragmidium subcorticium (Schränk) Wint.
Placosphaeria campanulae (DC.) Bauml.
 " *stellatarum* Sacc.
Plasmopara nivea Schroet.
 " *viticola* (B. & C.) Berlese & De Toni
Podosphaeria oxycanthae (DC.) DeBary
 " *tridactyla* (Wallr.) DeBary
Puccinia acrophila Sydow
 " *aegopodii* (Schum.) Link
 " *anemones-virginianae* Schw.
 " *annularis* (Strauss) Wint.
 " *arenariae* (Schum.) Schroet
 " *argentata* (Schultz) Wint.
 " *bardanae* Corda
 " *baryi* (Ber. & Br.) Wint.
 " *bromina* Erikss.
 " *coronata* Corda
 " *coronifera* Kleb.
 " *galii* (Pers.) Schroet.
 " *herniariae* Unger
 " *junci* (Strauss) Wint.
 " *lampsanae* (Schultz) Fckl.
 " *menthae* Pers.
 " *oreoselini* (Strauss) Körn.
 " *phragmites* (Schum.) Körn.
 " *polygoni-amphibii* Pers.
 " *smilacearum-digraphidis* Kleb.
 " *spergulae* DC.
 " *taneceti* DC.
 " *tragopogonis* (Pers.) Corda
 " *trititina* Erikss.
Schizonella melanogramma (DC.) Schroet.
Scirrhia rimosa (Alb. & Schw.) Fckl.
Septoria cynodontia Fckl.
 " *poae-annuae* Bres.
Sphacelotheca hydropiperis De Bary
Sphaeropsis visci (Solim.) Sacc.
Sporodesmium mucosum Sacc.
Staganosporopsis haloxyli Sydow
Streptothrix fusca Corda
Taphrina rhizophora Johans.
Tilletia tritici (Bjerk.) Wint.
Uromyces dactylidis Otth.
 " *fabae* (Pers.) DeBary
 " *ficariae* (Schum.) Lev.
 " *glycyrrhizae* (Rabenh.) P. Magn.
 " *heliotropii* Svedinski
 " *pisi* (Pers.) DeBary
 " *rumicis* (Schum.) Wint.

Uromyees scrophulariae (Schum.)	Urocystis agropyri (Preuss) Schroet.
B. & Br.	" anemones (Preuss) Scop.
" scutellatus (Rabenh.) P.	Ustilago anomala T. Kunze
Magn.	" longissima Sow.
" salsolae Reichardt	

F. M. Rolfs, Clemson College, S. C.

Thelephora pedicellata Schw.

T. E. Wilcox, Washington, D. C.

Ceratomyces auriflammeus (B. & C.) Murrill

Mrs A. Shantz, Old Forge

Leottia lubrica Pers.

E. B. Sterling, Trenton, N. J.

Ceratomyces bicolor (Peck) Murrill	Cortinarius castaneus (Bull.) Fries
" retipes (B. & C.)	Hebeloma pascuens Peck
Murrill	Inonotus radiatus (Sow.) Karst.
" subtomentosus (L.)	Lepiota procera (Scop.) Fries
Murrill	Suillellus frostii (Russell) Murrill

J. A. Sweigert, Plattsburg

Peridermium comptoniae (Arthur) Orton & Adams

Brother Victorin, Longueuil, Quebec

Alnus mollis Fernald	Draba arabisans Michx.
Amelanchier laevis Wiegand	Eleocharis palustris (L.) R. & S.
Ammodenia peploides (L.) Rupr.	var. glaucescens (Willd.) Gray
var. robusta Fern.	Elymus arenarius Linn.
Aquilegia canadensis Linn.	Epilobium palustre Linn.
Anemone riparia Fernald	Empetrum nigrum Linn.
Arabis brachycarpa (T. & G.)	Erigeron hyssopifolius Michx.
Britton	Eriophorum alpinum Linn.
Cakile edentule (Bigel.) Hook.	" angustifolium Roth
Capnoides sempervirens (L.) Borkh.	" gracile Koch
Carex arctata Boott	Fissipes acaule (L.) Small
" atratififormis Britton	Galium asperellum Michx.
" glareosa Wahl.	Geum rivale Linn.
" lanuginosa Michx.	" macrophyllum Willd.
" maritima O. F. Mueller	Halenia deflexa (J. E. Sm.) Griseb.
" vesicaria Linn.	Halerpestes cymbalaria (Pursh)
Castilleja acuminata (Pursh) Spreng.	Greene
Coelopleurum actaeifolium (Michx.)	Hicoria ovata (Mill.) Britton
Coul. & Rose	Hieracium pilosella Linn.
Coeloglossum bracteatum (Willd.)	Hierochloe odorata (L.) Wahl.
Parl.	Iris hookeri Penny

- Juncus brevicaudatus* (Engelm.) Fern.
 balticus Willd. var. *littoralis* Engelm.
Juniperus horizontalis Moench
 sibirica Burgsd.
Kalmia angustifolia Linn.
Limnorchis hyperborea (L.) Rydb.
Lathyrus pratensis Linn.
Ligusticum scoticum Linn.
Limonium carolinianum (Walt.) Britton
Lysimachia punctata Linn.
 terrestris (L.) B. S. P.
Lysiella obtusata (Pursh) Rydb.
Lysias hookeri (Torr.) Rydb.
 orbiculata (Pursh) Rydb.
Mertensia maritima (L.) S. F. Gray
Mitella nuda Linn.
Moehringia lateriflora (L.) Fenzl.
Moneses uniflora (L.) A. Gray
Montia lamprosperma Cham.
Oenothera muricata Linn.
Ophrys convallarioides (Sw.) Wight
 cordata Linn.
Dasiphora fruticosa (L.) Rydb.
Panicularia nervata (Willd.) Kuntze
Pedicularis canadensis Linn.
 palustris Linn.
Plantago boreale Lange
 decipiens Barneous
Poa eminens J. S. Dresl.
Potentilla pennsylvanica Linn.
Primula farinosa var. *macropoda* Fernald
Puccinella angustata (R. Br.) Rand & Redfield
Pyrola secunda Linn.
 uliginosa Torrey
Ranunculus septentrionalis Poir.
Rubus triflorus Rich.
Rumex obtusifolius Linn.
- Salicornia europea* var. *prostrata* (Pall.) Fernald
Salix balsamifera Barratt
Sagina nodosa (L.) Fenzl.
Sanguisorba canadensis Linn.
Saxifraga virginensis Michx.
Scirpus americanus Pers.
 clintonii A. Gray
 cyperinus (L.) Kunth
 paludosus A. Nels.
 rubrotinctus Fernald
 rufus (Huds.) Schrad.
Senecio discoideus (Hook.) Britton
 pauperculus Michx.
 pseudo-arnica Less.
Stellaria borealis Bigel.
 humifusa Rottb.
Sparganium angustifolium Michx.
Spartina michauxiana Hitchc.
Streptopus roseus Michx.
Sibbaldiopsis tridentata (Ait.) Rydb.
Tissa canadensis (Pers.) Britton
Trientalis americana (Pers.) Pursh
Triosteum aurantiacum Bicknell
Trillium erectum Linn.
 grandiflorum Salisb.
Triglochin maritima Linn.
 palustre Linn.
Trisetum spicatum (L.) Richter
Vagnera racemosa (L.) Morong
 stellata (L.) Morong
Vaccinium angustifolium Ait.
 canadense Kalm.
 corymbosum Linn.
Viburnum lentago Linn.
Viola conspersa Reichenb.
Vitis-idaea vitis-idaea (L.) Britton
Washingtonia claytoni (Michx.) Britton
Zannichella palustris Linn.
Zizia aurea (L.) Koch
Zostera marina Linn.

D. B. Young, Albany

Naucoria vernalis Peck

THE HERBARIUM OF CHARLES S. SHELDON

BY HOMER D. HOUSE

The herbarium of Professor Charles S. Sheldon of Oswego, N. Y., was presented to the State Museum during the summer of 1914. The herbarium represents the botanical activity of a lifetime on the part of Professor Sheldon, numbering over 14,000 mounted specimens from every portion of the United States, Canada, Mexico and Europe. Several valuable exsiccates are represented in the collection, including Pringle (Mexico), Curtis (Florida), Langlois (Louisiana) and several others.

Professor Charles S. Sheldon was born in Oswego, and received his early education in the public and high schools of that city. He was graduated from the Oswego Normal School in 1875. The next year was spent under Dr James Hall, arranging the State collection of minerals at Albany. From 1876 to 1880 Professor Sheldon was a student at Cornell University, from which he was graduated with honor. While at Cornell Professor Sheldon developed under Doctor Prentiss, then professor of botany, a love for the study of botany which resulted in the formation of an herbarium destined to become one of the largest private collections in the State.

For the next thirty-four years Professor Sheldon followed the profession of teaching, beginning with the public schools of Alexandria Bay, N. Y. (1881-83), then as head of the science department of the Missouri State Normal School at Kirksville, Mo. (1883-93), and the chair of biology in the State Normal School at Oswego, N. Y. (1893-1914).

During his years in Missouri, Professor Sheldon spent his summers botanizing in the western states and territories, Nevada and Utah being the only states not visited. His collections in this region represent nearly 1500 different species. After coming to Oswego his opportunities to collect became more limited and most of his spare moments were devoted to the mounting and systematizing of his collections and enlarging his herbarium by means of extensive exchanges, until the collection contained close to 20,000 specimens. Owing to insect depredations, many specimens were ruined, so that the collection at present contains about 15,000 good specimens, exclusive of about 300 duplicates.

The composition of Professor Sheldon's herbarium is shown in the following enumeration of the collectors whose collections are represented by mounted specimens:

C. G. Pringle, Mexico (2351), Arizona (195), Texas and California (20).	2566
Charles S. Sheldon, western states, chiefly from Colorado with some from Oklahoma, Texas, Arizona and Oregon (810); Missouri (490); vicinity of Washington, D. C. (300) and Martha's Vineyard (175)..	1775
A. E. Lomax, European plants.....	1686
A. H. Curtiss, plants of Florida.....	1025
Charles S. Sheldon, plants of New York collected chiefly by Professor Sheldon in Oswego and Tompkins counties.....	1020
C. F. Sonne, plants of California.....	400
H. E. Hasse, plants of California with some from Arkansas.....	445
J. H. Sandberg, plants of the northwestern states, including collections by J. H. Sandberg and J. B. Leiberger, and some Minnesota plants collected by Doctor Sandberg.....	380
Thomas Howell, plants of Washington and Oregon.....	355
A. B. Langlois, plants of Louisiana.....	345
Biltmore herbarium, southern states.....	280
S. B. Parish, plants of southern California.....	250
J. C. Alling, plants of Colorado (120) and Japan (114).....	234
G. R. Vasey, plants from Florida, Texas, New Mexico, Michigan and the Pacific coast	141
W. N. Suksdorf, plants of Washington.....	120
Michener and Bioletti, plants of California.....	115
George W. Letterman, plants from Colorado, Texas and Pacific coast	110
E. Wilkinson, plants from the Santa Eulalia plains and hills, Chihuahua, Mexico	105
C. R. Orcutt, plants from southern California and northern Lower California	90
J. W. Chickering, jr, plants from the mountains of North Carolina and New England.....	85
John Donnell Smith, plants of Maryland and the southeastern states..	76
H. H. Rusby, plants of Arizona:.....	56
Miscellaneous collections: include plants from George B. Aiton (Idaho), Mrs M. E. P. Ames (California), C. F. Baker (Colorado), Baker and Earle (Alabama), H. C. Beardslee (Ohio and North Carolina), J. Blake (New England), F. Blanchard (Vermont), F. H. Burglehaus (Minnesota and Wisconsin), B. F. Bush (Missouri), B. P. Clark (New England), C. A. Davis (Michigan), H. M. Denslow (Illinois), L. S. Doud (New England), Dr K. O. Foltz (Ohio), C. D. Fretz (Pennsylvania), H. A. Green (New Jersey), A. A. Heller (Pennsylvania and North Carolina), Mr and Mrs G. H. Hicks (Colorado and Michigan), Mr and Mrs J. G. Lemmon, (California and Arizona), J. H. Oyster (Kansas), A. F. Rote (Wisconsin), C. C. Schmidt (Minnesota), H. A. Sheldon (California), Emma A. Shumway (Washington), A. H. Young (Indiana) and numerous other collectors.....	2744

Total number of specimens..... 14,403

The New York State specimens from Professor Sheldon's herbarium number 1020, of which the following should be recorded for their rarity or for the record of distribution which they establish.

Albany county

Amaranthus crispus (Lesp. & Thév.) A. Braun

Cayuga county

Moneses uniflora (L.) A. Gray *Pyrola chlorantha* Sw.

Chemung county

Hydrangea arborescens Linn. *Magnolia acuminata* Linn.
Polemonium reptans Linn.

Dutchess county

Adlumia fungosa (Ait.) Greene

Erie county

Clinopodium glabrum (Nutt.) Kuntze *Corispermum hyssopifolium* Linn.
Clintonia umbellulata (Michx.) Torr. *Glycyrrhiza lepidota* Nutt.

Hamilton county

Lobelia dortmanna Linn.

Herkimer county

Cytherea bulbosa (L.) House *Halenia deflexa* (Sm.) Griseb.

Lewis county

Ophrys convallaroides (Sw.) Wight

Livingston county

Jeffersonia diphylla (L.) Pers.

Madison county

Phyllitis scolopendrium (L.) Hoffm.

Oneida county

Lepargyrea canadensis (L.) Greene

Onondaga county

Anticlea elegans (Pursh) Rydb. *Halerpestes cymbalaria* (Pursh)
Juncus gerardi Loisel. Greene

Oswego county

Agalinis paupercula (A. Gray) Britton *Anemone cylindrica* A. Gray
ton *Andropogon furcatus* Muhl.

Oswego county (continued)

<i>Arethusa bulbosa</i> Linn.	<i>Hyoscyamus niger</i> Linn.
<i>Ballota nigra</i> Linn.	<i>Isotria verticillata</i> (Willd.) Raf.
<i>Bartonia virginica</i> (L.) B. S. P.	<i>Juncus balticus</i> Linn.
<i>Batrachium circinatum</i> (Sibth.) Rchb.	" <i>torreyi</i> Coville
<i>Bidens beckii</i> Torrey	<i>Lathyrus maritimus</i> (L.) Bigel.
<i>Blephariglotis leucophaea</i> (A. Gray) Rydb.	" <i>myrtifolius</i> Muhl.
<i>Botrychium silaifolium</i> Presl.	<i>Lecticula resupinata</i> (B. D. Greene) Barnhart.
" <i>simplex</i> E. Hitchc.	<i>Lychnis chalcedonica</i> Linn.
<i>Clinopodium vulgare</i> Linn.	" <i>flos-cuculi</i> Linn.
<i>Centaureum centaurium</i> (L.) Wight	<i>Lythrum alatum</i> Pursh
<i>Dryopteris hexagonoptera</i> . (Michx.) C. Chr.	" <i>salicaria</i> Linn.
<i>Eleocharis mutata</i> (L.) R. & S.	<i>Muhlenbergia willdenowii</i> Trin.
" <i>robbinsii</i> Oakes	<i>Ophrys australis</i> (Lindl.) House
<i>Equisetum littorale</i> Kuehl	<i>Ophioglossum vulgatum</i> Linn.
<i>Eriophorum callitrix</i> Cham.	<i>Potentilla recta</i> Linn.
<i>Gaura parviflora</i> Dougl.	<i>Ranunculus obtusiusculus</i> Raf.
<i>Grindelia squarrosa</i> (Pursh) Dunal	<i>Razoumofskya pusilla</i> (Peck) Kuntze
<i>Heteranthera dubia</i> (Jacq.) MacM.	<i>Rynchospora macrostachya</i> Torrey
<i>Hieracium pilosella</i> Linn.	<i>Scheuchzeria palustris</i> Linn.
	<i>Utricularia gibba</i> Linn.

Tompkins county

<i>Batrachium trichophyllum</i> (Chaix) F. Schultz	<i>Lespedeza capitata</i> Michx.
<i>Aplectrum hyemale</i> (Muhl.) Torrey	<i>Parnassia caroliniana</i> Michx.
<i>Disporum lanuginosum</i> (Michx.) Nichols	<i>Pinus resinosa</i> Ait.
<i>Gymnocladus dioica</i> (L.) Koch	<i>Pinguicula vulgaris</i> Linn.
<i>Lathyrus ochroleucus</i> Hook.	<i>Primula mistassinica</i> Michx.
	<i>Schmaltzia crenata</i> (Mill.) Greene
	<i>Trollius laxus</i> Salisb.

Wyoming county

<i>Lysias orbiculata</i> (Pursh) Rydb.
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NEW OR INTERESTING SPECIES OF FUNGI

BY HOMER D. HOUSE

Aecidium lini Dearness & House, sp. nov.

Aecia caulicolous and amphigenous but mostly hypophyllous, in irregular groups or scattered, on discolored areas which are yellowish at first and finally reddish brown, small, $200\ \mu$ in diameter; peridium pale yellow, erose-truncate or lacerate and recurved, rising about $50\ \mu$ over the ruptured cuticle, cells rhomboidal, wider distally, overlapping, prominently verrucose, variable in size, averaging about 22 by $15\ \mu$, wall 4 – $5\ \mu$ thick; aeciospores yellow, globose to ellipsoid, 18 to 22 by $16\ \mu$, wall minutely verrucose, hardly $2\ \mu$ thick.

On stems and leaves of *Linum virginianum*. On herbarium specimens collected by Dr Charles H. Peck at Amagansett, Long Island, N. Y., July (the year not given). Type in the herbarium of the New York State Museum.

Ascochyta clematidina Thumen

North Greenbush, on living leaves of *Clematis virginiana*. H. D. House, no. 247, October 10, 1914.

Asteroma ribicolum E. & E.

North Greenbush, on living leaves of *Ribes americana*. H. D. House, no. 248, October 10, 1914. This and the last mentioned species are both new to the State flora.

Cercospora dubia (Riess) Wint.

Albany, on living leaves of *Chenopodium album*. H. D. House, October 20, 1914.

Cercospora teucris E. & K.

Orient Point, Suffolk county, Long Island, on living leaves of *Teucrium canadense*. Roy Latham, August 14, 1911. New to the State flora.

Coniosporium lumulosum Sacc.

Tupper Lake, on dead wood of *Pinus strobus*. H. D. House, August 26, 1913. Cotype.

Cortinarius distans Peck

Oneida, Madison county. H. D. House, August 1914. The type locality is Greenbush, Rensselaer county, and the species has also been collected in the counties of Albany, Essex, Suffolk and Warren.

***Curreya peckiana* Sacc.**

Tupper Lake, on dead stems of *Nemopanthes mucronata*. H. D. House, August 1913. Cotype.

***Cytospora phomopsis* Sacc.**

Albany, on dead twigs of *Sassafras variifolium*. Cotype. Other twigs of the same collection showed the presence of the following additional species: *Sphaeropsis sassafras* E. & E. *Sphaeropsis seriata* Peck; *Valsa subclypeata* Cke. & Peck.

***Dendrophoma phyllogena* Sacc.**

Eaton, Madison county, on living and languishing leaves of *Chamaedaphne calyculata*. H. D. House, August 30, 1913. Cotype.

***Dothidella junci* (Fr.) Sacc.**

(*Phyllachora junci* Fckl.; *Dothidea junci* Fr.)

Albany, on dead and languishing stems of *Juncus tenuis*, H. D. House, August 1913. Also collected at Cedarville, Herkimer county, by Doctor Peck.

***Harpographium magnum* Sacc.**

Near Albany, on dead stems of *Prunus cuneata*. H. D. House, July 1913. Cotype.

***Hebeloma peckii* nom. nov.**

Hebeloma palustre Peck. N. Y. State Mus. Bul. 176, p. 20. 1915 (not *Hebeloma palustre* Peck. N. Y., State Mus. Bul. 25, p. 649. 1899).

***Lactaria hygrophoroides* B. & C.**

(*L. distans* Peck)

Oneida, Madison county. H. D. House, August 1914.

***Lactaria oculatus* (Peck) Burlingham**

(*L. subdulcis* var. *oculatus* Peck)

Thick leaf mold in deciduous woods near Oneida, Madison county. H. D. House, August 1914.

***Lactaria obnubilis* Lasch**

A small species resembling *L. subdulcis*; pileus 1-2.5 cm broad, stem 2-5 cm long; the pileus convex to nearly plane with a

distinct darker colored umbo in the center which becomes very prominent and acute in drying. The lamellae are somewhat lutescent when young becoming brownish in older specimens.

Common in sunny sphagnum places in open woods near Oneida. H. D. House, August 1914. New to America.

***Leptosphaeria houseana* Sacc.**

Albany, on dead stems of *Thalictrum dioicum*. H. D. House, April 1914. Cotype.

***Macrophoma celtidicola* Dearness & House, sp. nov.**

Pycnidia depressed-globose, carbonous, scattered, seated on the cortex, erumpent through the cuticle, 180 μ broad; spores hyaline, 1-3 nucleate and grumous, obovate to oblong, rounded at the ends, 20-33 by 9-15 μ , on basidia of variable length, mostly 3-4 μ in thickness.

On dead twigs of *Celtis occidentalis*. Northampton, Fulton county. H. D. House, no. 14.15a, May 27, 1914. Type in the herbarium of the New York State Museum.

***Marasmius elongatipes* Peck**

Oneida, Madison county. H. D. House, August 1914.

***Micropeltis pitya* Sacc.**

Tupper Lake, on dead leaves of *Abies balsamea*. H. D. House, August 26, 1913. Cotype.

***Peronospora effusa* (Grev.) Rabenh.**

Albany, on living leaves of *Chenopodium album*. H. D. House, October 20, 1914.

***Phoma houseana* Sacc.**

Featherstone lake, Schenectady county, on dead stems of *Vaccinium corymbosum*. H. D. House, July 27, 1913. Cotype.

***Phomopsis viticola* Sacc.**

Albany, on dead stems of *Vitis aestivalis*. H. D. House, March 1914. New to the State flora.

***Phomopsis daturae* (R. & F.) Sacc.**

Albany, on dead steams of *Datura stramonium*. H. D. House, July 1913. New to the State flora.

Nothomyces nigricans Sacc.

Near Oneida, Madison county, on dead bark of *Carpinus caroliniana*. H. D. House, July 22, 1913. Cotype.

✓ **Phyllosticta baccharidis** Dearness & House, sp. nov.

Spots flesh colored to pale ferruginous, subcircular, determined by the large veinlets, usually visible on both surfaces of the leaf and similar, but in some cases showing on the upper surface only, with a very distinct concolorous raised border, tending to be deciduous, 3-8 by 2-6 mm; pycnidia dark, amphigenous but more numerous on the upper surface of the spot, as many as thirty to a spot, round perforate but sometimes hysteriiform, 50-115 μ , mostly about 75 μ in diameter; spores hyaline, reniform, usually nucleate at each end, 4-6 by 3 μ .

On living leaves of *Baccharis halimifolia* Linn. Orient Point, Long Island. Roy Latham, August 14, 1911. Type in the herbarium of the New York State Museum.

Phyllosticta chenopodii Sacc.

Albany, on living leaves of *Chenopodium album* Linn. H. D. House, October 20, 1914. Apparently new to America as the specimens distributed in the North American Fungi, no. 1158, under this name are *Septoria atriplicis*.

✓ **Phyllosticta medeolae** Dearness & House, sp. nov.

Spots reddish or gray-red areas beginning at the tips of the leaves and extending in some cases over half of the leaf; pycnidia black, sulcate, epiphyllous, scattered, about 100 μ in diameter; spores hyaline, sometimes guttulate, linear-oblong, 12-15 by 2-3 μ .

On living or languishing leaves of *Medeola virginiana* Linn. near Albany. H. D. House, no. 14.137, September 12, 1914.

Phyllosticta lantanoides Peck

Albany, on living leaves of *Viburnum cassinoides* Linn. H. D. House, September 12, 1914. Originally described from Caroga, on leaves of *Viburnum alnifolium*.

Phyllosticta nyssae Cooke

Karner, Albany county, on living leaves of *Nyssa sylvatica* Marsh. H. D. House, October 3, 1914. Apparently new to the State.

***Phyllosticta oakesiae* Dearness & House, sp. nov.**

Spots colorless, translucent, surrounded by an indistinct border from which a reddish stain extends into the leaf tissues, one-half to 1 cm broad; pycnidia dark brown, epiphyllous but visible from beneath, 100–200 μ in diameter; spores hyaline, grumous or guttulate, elliptic to fusoid, 9–22 by 5–7 μ .

On languishing leaves of *Uvularia* (*Oakesia*) *sessilifolia* Linn. Karner, Albany county. H. D. House, no. 14,218, October 8, 1914. Type in the herbarium of the New York State Museum.

***Phyllosticta orobella* Sacc.**

On languishing leaves of the Beach pea, *Lathyrus maritimus* (Linn.) Bigel. Orient Point, Long Island. Roy Latham, September 11, 1911. New to America. The spores are 2-guttulate and 7–11 by 3 μ .

***Placosphaeria celtidis* Dearness & House, sp. nov.**

Stromata scattered, lenticel like, 1–2 by 1 mm, pycnidia 3–8 in a stroma, cortical, erumpent through the cuticle, carbonous, conical, 100–160 μ ; spores issuing in cirrhi in the water, hyaline to amber, mostly 2-nucleate, 5–8 by 3–3.5 μ .

On dead twigs of *Celtis occidentalis* Linn. Saugerties. Dr Charles H. Peck, May. Type in the herbarium of the New York State Museum.

***Puccinia tenuis* (Schw.) Burrill, I.**

(*Aecidium tenue* Schw.)

On leaves of *Eupatorium ageratoides* Linn. Near Hannibal, Oswego county. H. D. House, no. 14,36, June 27, 1914.

This species has also been collected in the Catskill mountains upon the same host by Dr Charles H. Peck, and near Ottawa, Canada, by Dr J. M. Macoun, no. 156, June 13, 1903.

***Septoria breviuscula* Sacc.**

Eaton, Madison county, on languishing and dead leaves of *Linnaea americana*. H. D. House, August 30, 1913. Cotype.

***Septoria lobeliae* Pk. var. *lobeliae-inflatae* Sacc.**

Albany, on living leaves of *Lobelia inflata*. H. D. House, July 1913. Cotype.

***Sphaerella populnea* Sacc.**

Tupper Lake, on dead areas of living leaves of *Populus balsamifera*, associated upon the same leaves with *Sep-toria populicola* Peck. H. D. House, August 22, 1913. Cotype.

***Sporodesmium pilulare* Sacc.**

Albany, on dead bark of *Juniperus virginiana*. H. D. House, July 1913. Cotype.

***Rhabdospora clarkeana* Sacc.**

Sand lake, Rensselaer county, on dead stems of *Aquilegia canadensis*. H. D. House, July 4, 1913. Cotype. Named in honor of Dr J. M. Clarke, Director of the New York State Museum.

***Ramularia obovata* Fckl.**

Karner, Albany county, on living leaves of *Rumex obtusifolius*. H. D. House, no. 250, October 8, 1914.

***Russula variata* Banning.**

A common species in the sandy oak woods near Sylvan Beach, Oneida county, at the eastern end of Oneida lake. Collected there in August 1914, by H. D. House.

***Venturia gaultheriae* E. & E.**

Karner, Albany county, on living leaves of *Gaultheria procumbens*: H. D. House, no. 212, October 8, 1914.

***Macrophoma peckiana* Dearness & House, sp. nov.**

Pycnidia scattered, sometimes confluent, seated on the phloem fibers and raising the epidermis into oval, ruptured pustules 1 by $\frac{3}{4}$ mm; the short or flat black ostiola visible usually through a gray pulverulent layer of the disorganized cortex; spores hyaline, 10–12 by $4-4\frac{1}{2}$ μ , wall 1 μ thick, on short basidia.

On dead twigs of *Ceanothus americanus* Linn. North Greenbush, Rensselaer county, collected by Dr C. H. Peck.

***Thyridium ceanothi* Dearness & House, sp. nov.**

Perithecia carbonous, thickly and evenly scattered, globose, 160–360 μ , raising the epidermis through which shows the shining black stromatic shield; ostiola short punctiform; asci paraphysate, clavate,

stipitate, the stipe lengthening in water in extreme cases to 300 μ ; p. sp. 75-90 by 6-12 μ ; sporidia subbiseriate, triseptate, cells in some of the spores septate lengthwise (muriform); rounded and wider at the upper end, subacute at the lower end, smoky brown, 15-20 μ by 5-6 μ .

On dead twigs of *Ceanothus americanus* Linn. near Albany, N. Y., H. D. House, no. 14.255 November 1, 1914. Type in the herbarium of New York State Museum.

***Tyromyces spraguei* (B. & C.) Murrill**

Catskill, N. Y., on an oak stump. H. D. House, no. 14.39. August 19, 1914.

NEW OR NOTEWORTHY EXTRALIMITAL FUNGI

BY HOMER D. HOUSE

✓ *Cercospora argythamniae* Dearness & House sp. nov.

Spots beginning as a yellowish green discoloration of the naturally purplish leaf, not determinate; the fruiting part with a definite yellowish or brownish border surrounded by a greenish rim, opaque when held up to the light, 2-4 mm in diameter and thickly dotted with the dark tubercular bases of the tufts of conidia; conidia arising from short or obsolete hyphae, pale brown when viewed with reflected light; amphigenous, obclavate, $15-40\ \mu$ by $2\ \mu$ above to 3 or even $3\frac{1}{2}\ \mu$ near the base, indistinctly 1-3 septate.

On *Argythamnia mercurialina* Muell. Caddo, Indian Territory (Oklahoma), June 22, 1891. Charles S. Sheldon.

Related to *Cercospora crotonifoliae* Cooke, which is epiphyllous and has cylindrical spores.

Gymnopilus subviridis Murrill, sp. nov.

Pileus convex to nearly plane, circular, 8-10 cm broad; surface dry, dull green with a bluish green bloom, becoming glabrous with age; margin very involute, undulate, not at all appendiculate; context greenish yellow with an agreeable odor; lamellae deeply emarginate, broad, inserted, distant, brownish green, uneven on the edges; spores broadly ovoid to subglobose, ferruginous, asperulate, about 5 by $3.5-4\ \mu$; stipe long, slender, flexuous, largest at the middle, concolorous, staining brownish, fleshy-fibrous, greenish within, reaching 10-15 cm in length and 1 cm in thickness.

Type collected on a decayed fir stump at Olympia, Wash., November 27, 1914, by Miss M. McKenny (Herb. N. Y. State Museum). This is an interesting addition to the large number of species of this genus from the Pacific coast. It may readily be recognized by its green color. Two other species, *G. subflavidus* Murrill and *G. viridans* Murrill, become green spotted when handled, but they are entirely different from Miss McKenny's plant. For the benefit of those using Saccardo's nomenclature, this species is recombined as *Flammula subviridis* Murrill.

Cercospora absinthii (Peck) Sacc.

Marshfield, Oregon, on living leaves of *Artemisia suksdorfii* Piper. Dr W. Haydon, no. 515, September 9, 1914. The

fungus was found abundant and even in better condition than the type described by Doctor Peck as *Helminthosporium absinthii*, on *Artemisia absinthium* from North Elba, N. Y.

***Cercospora namae* Dearness & House, sp. nov.**

Spots pale brown, immarginate; hyphae tufted, sooty-brown, short, distinctly visible under the hand lens, epiphyllous or at least mostly so; conida subcylindrical, hyaline, curved, 45–100 μ , mostly about 75 μ by 2.5 μ .

On *Nama ovatum* (Nutt.) Britton, (*Hydrolea ovata* Nutt.) Crebs, Indian Territory (Oklahoma). Charles S. Sheldon, August 21, 1891. Type in the herbarium of New York State Museum.

***Cylindrosporium spigeliae* Dearness & House, sp. nov.**

Spots circular, grayish, 1–5 mm broad, with a distinct dark border about .5 mm wide; similar on both surfaces of the leaf; acervuli amphigenous, numerous, especially on the lower surface of the leaf, 50–90 μ , nearly concolorous but with somewhat darker margin; sporules hyaline, mostly straight, very obscurely if at all septate, but somewhat granular, 15–35 by 2 μ .

On living leaves of *Spigelia anthelmia* Linn. Elliott's Key, Florida. A. H. Curtiss, no. 5454, July 4, 1895. Type in herbarium of New York State Museum.

***Laestadia galactina* Dearness & House, sp. nov.**

Perithecia dark brown, subcuticular, thickly and evenly scattered, mostly epiphyllous, globose, flattish but not depressed, 100–230 μ in diameter; asci aparaphysate, broadest near the middle, 8-spored, short-stipitate; spores 60–75 by 25 μ ; sporidia hyaline, grumous to finely guttulate, 25–30 by 6–7 μ , rounded at the ends.

On dead and languishing leaves and petioles of *Galaxaphylla* Linn. Biltmore, N. C. H. D. House. June 1913. Type in herbarium of New York State Museum.

***Phyllosticta maurandiae* Dearness & House, sp. nov.**

Spots thin and circular, white with a raised border but no contiguous discoloration, scattered, small, 1–2 mm in diameter; pycnidia 0–21 on a spot, distinctly visible from both sides of the leaf, reddish, subglobose, 90–144 μ in diameter; spores hyaline, flat, oval, minute, 3.5–4 by 1 μ when measured on their edges, 3.5–4 by 2.75–3 μ when measured on their face, distinctly 2-nucleate.

On living leaves of *Maurandia semperflorens* Ort. Monte Alban, Oaxaca, Mexico. C. G. Pringle, no. 4786. August 14, 1894. Type in herbarium of New York State Museum.

Phyllosticta pachysandrae Dearness & House, sp. nov.

Spots ashen, becoming sordid brown, fruiting parts translucent, at first circular, 2–5 mm broad and later becoming confluent and breaking down the leaf in large areas along the margin; pycnidia epiphyllous, globose-conic, perforate at summit, brown, 90–110 μ ; spores minute, very numerous, hyalin, oblong, 4.5–6 by 1 μ .

On living leaves of *Pachysandra procumbens* Michx. cultivated in the Biltmore Nurseries at Biltmore, N. C. H. D. House, June, 1913. Type in herbarium of New York State Museum.

Phyllosticta rhexiae Dearness & House, sp. nov.

Spots reddish brown, 1.5–2 mm in diameter, with a white center bearing a single pycnidium, similar on both surfaces of the leaf; pycnidia solitary in the white center of the spot, epiphyllous, brown, minute, 40–50 μ in diameter; spores minute, subhyaline, oblong or nearly so, 3 by 1 μ .

On living and languishing leaves of *Rhexia ciliosa* Michx. Jacksonville, Fla. A. H. Curtiss, June 24, 1896.

Septoria darlingtoniae Dearness & House, sp. nov.

Spots forming grayish, irregular areas from 1 mm to 1.5 cm broad; cuticle becoming more or less detached and where quite separate presenting pale or whitish spots, upon which and around which the pycnidia are numerous; pycnidia brown, thin, often open at the top, 80–140 μ ; sporules hyaline, continuous or 1–3-septate, somewhat stouter at one end and marked in most cases by apparently flattened sections, 20–64 by 2.5–3 μ .

On living and languishing leaves of *Darlingtonia californica* Torrey. Marshfield, Ore. H. D. House, August, 1912. Type in herbarium of New York State Museum.

Septoria erythraeae Dearness & House, sp. nov.

Spots ill defined, somewhat pallid areas over the whole leaf and along the stems, the punctation of the numerous pycnidia rendering the affected area more obvious on most leaves than the discoloration; pycnidia numerous, scattered, visible from both surfaces of the leaf, more numerous above than below, brown, subconic, small, 30–75 μ in diameter, mostly between 50 and 60 μ ; sporules straight, continuous, hyaline, 15–30 μ , but mostly about 25 by 1–1.5 μ .

On leaves and petioles of *Erythraea macrantha* H. & A. on mountains near Chapala, Jalisco, Mexico. C. G. Pringle, no. 2422, December 16, 1889. Type in herbarium of New York State Museum.

***Septoria tinctoria* Dearness & House, sp. nov.**

Spots brownish-red, circular, mostly about 1 cm in diameter, similar but paler beneath, having a white central area 2-4 mm in diameter with a distinct, sharply-raised, black border; pycnidia strictly epiphyllous, 1-12, scattered on the white central area, semiimmersed, black with a paler center, 80-100 μ ; sporules hyaline, curved, cylindric, 2-4-septate, 25-48 by 2.5-3 μ .

On living leaves of *Symplocos tinctoria* L'Her. Prescott, Ark. G. W. Letterman, August, 1892. Type in herbarium of New York State Museum.

Septoria stigma B. & C., on this host, has short sporules 15 μ ; and *Septoria symploci* Ell. & Mart. has hypophyllous perithecia and cylindric-clavate sporules.

***Phyllosticta raui* (Peck) Dearness & House**

Sphaeropsis raui Peck. Bot. Gaz. 3: 34. 1878. *Phoma raui* Sacc. Syll. 3: 143. 1884. *Macrophoma raui* Berl. & Vogl. in Atti Soc. Veneto-Trentina p. 181. 1886.

Examination of the type material collected in Colorado on *Artemisia scopulorum*, by Brandegee, and communicated to Doctor Peck by E. A. Rau, shows that it properly belongs in the genus *Phyllosticta*.

***Peridermium cerebrum* Peck**

An interesting form of this species occurs upon *Pinus chihuahuana* in Arizona, and causing an abortion of the cones as shown in the accompanying plate. The specimen from which this illustration was taken was collected near Canille, Ariz., by Mr William T. Doherty, July 12, 1914.

Specimens of *Peridermium cerebrum* hitherto collected in this country have been caulicolous, producing enlargements of woody stems. This appears to be, so far as I can learn, the first collection of the species on cones. It will doubtless prove to be a different species when its telial stage (some species of *Cronartium*) becomes known. The dehiscence of the aecia is quite characteristic,



Peridermium cerebrum Peck, causing abortion of cone on *Pinus chihuahuana*

resembling *Peridermium filamentosum*, but lacking the usual filaments which run up through the mass of spores in that species. In *P. cerebrum* the upper part of the peridia usually flakes off in scales, which is quite unlike the way this specimen appears to behave, the peridia of which stand up prominently and are beautifully fringed. The spores exceed in length the measurements given for either of these species.

***Melanopsamma waghornei* House, nom. nov.**

Melanopsamma borealis E. & E. Proc. Phil. Acad. Nat. Sci. 1893. p. 445. Sacc. Syll. XL: 305. Type collected in Newfoundland by Waghorne.

The host plant is not given, but the specimen in the herbarium of the New York State Museum, a cotype, appears to be upon *Populus*. The name proposed for it by Ellis and Everhart is antedated by *Melanopsamma borealis* (Karst.) Sacc. Mich. 1: 347; Sacc. Syll. 1: 578.

***Ramularia delphinii* Dearness & House, n. sp.**

Spots arid, circular to oblong, extending between the veins 3 to 5 mm, bounded by a raised dark brown border, paler above but otherwise alike on both sides of the leaf: tufts of fertile hyphae prominent, hypophyllous, 15-30 by $2\frac{1}{2}$ -3 μ , bearing continuous conidia 15-33 by 4-5 μ .

On leaves of *Delphinium scopulorum* Gray. Collected by Charles S. Sheldon, El Paso county, Colorado. August 10, 1892. Type in herbarium of New York State Museum.

WESTERN PLANTS INTRODUCED AT ROCHESTER

BY HOMER D. HOUSE

Among some specimens received for identification from Prof. M. S. Baxter, of Rochester, was found a grass which was determined as *Stipa comata* Trin. & Rupr., known in the west as porcupine or blow-out grass. Its natural range is from Iowa to Texas, California and Yukon. It is an interesting addition to the already long list of western plants which have become established in the vicinity of the Cobb's hill reservoir at Rochester and collected there by Mr Baxter and by Miss Beckwith.

With the cutting away of the forests of the east and the gradual drying up of a large portion of the soil, the tide of weed migration from European countries has been met by a counter migration of western species, which are largely adapted to dry situations, into the fields and waste places of the eastern states.

Following the construction of the Cobb's hill reservoir at Rochester, a rather notable establishment of western species took place. This may be partly explained by the use of western hay or grain for the animals used in the work, if such was the case. In the absence of evidence regarding the means by which the seeds of these western species reached Cobb's hill, and the fact that few of them have been reported from other eastern localities would seem to indicate that the seeds reached there in either hay or grain.

During the summers of 1910 to 1914, a large number of these western emigrants were collected there by Prof. M. S. Baxter and by Miss Florence Beckwith. The list of them which follows includes only those deposited in the State herbarium.

<i>Artemisia carruthi</i> Wood	<i>Gaura coccinea</i> Pursh
" <i>biennis</i> Willd.	<i>Gymnolomia multiflora</i> (Nutt.)
" <i>dracunculoides</i> Pursh	Benth. & Hook.
" <i>frigida</i> Willd.	<i>Helianthus petiolaris</i> Nutt.
" <i>glauca</i> Pall.	<i>Lappula echinata</i> Gilibert
" <i>trifida</i> Nutt.	<i>Lygodesmia exigua</i> A. Gray
<i>Anogra albicaulis</i> (Pursh) Britton	<i>Machaeranthera pulverulenta</i> (Nutt.)
<i>Allionia hirsuta</i> Pursh	Greene
<i>Aster multifolius</i> Ait.	" <i>tanacetifolia</i> (H. B.
<i>Chaenactis stevioides</i> Hook. & Arn.	K.) Nees
<i>Bidens tenuisecta</i> A. Gray	<i>Monolepis nuttalliana</i> (R. & S.)
<i>Chrysothamnus pinifolius</i> Greene	Greene
<i>Boebera papposa</i> (Vent.) Rydb.	<i>Salsola pestifer</i> A. Nelson
(<i>Drysodia papposa</i> (Vent.) Hitchc.)	<i>Sideranthus gracilis</i> (Nutt.) Rydb.
<i>Grindelia squarrosa</i> (Pursh) Dunal	<i>Verbena bracteosa</i> Michx.
" <i>squarrosa nuda</i> A. Gray	<i>Stipa comata</i> Trin. & Rupr.

Most of these species have been observed for from two to four years, and it is an interesting conjecture as to whether they will become permanent members of our flora or soon disappear. Some of them are already well established in many localities, such as *Salsola pestifer*, *Verbena bracteosa* and *Grandelia squarrosa*, which are fast becoming obnoxious weeds in many places.

NOTES UPON LOCAL FLORAS

BY HOMER D. HOUSE

1 FULTON COUNTY

***Orontium aquaticum* Linn.**

Collected near Broadalbin in June 1884, by J. D. Greenslete. The specimen is preserved in the State herbarium and Messrs A. Olsson and C. P. Alexander, who have collected extensively in this section within the past few years, have failed to rediscover this species. The Fulton county record of this species is interesting because the species is credited in this State usually only to the southern counties, the specimens in the State herbarium being from southern Chenango county, Sullivan, Orange, Richmond and Suffolk counties.

***Trillium cernuum* Linn.**

Rich, moist soil in thickets and thin woods, near Northampton. H. D. House, May 27, 1914. No. 5424.

***Viola lanceolata* Linn.**

Moist meadows, near Northampton. H. D. House, May 27, 1914. No. 5422.

***Viola primulaefolia* Linn.**

Moist meadows, near Northampton, growing with *Viola lanceolata*. H. D. House, May 27, 1914. No. 5421.

***Viola septentrionalis* Greene**

Open wood and roadsides, near Northampton. H. D. House, May 27, 1914. No. 5412.

***Viola fimbriatula* x *septentrionalis* Brainerd**

Roadsides near Northampton. H. D. House, May 27, 1914. No. 5415.

2 HERKIMER COUNTY

***Lysimachia vulgaris* Linn.**

Common and thoroughly naturalized along the banks of West Canada creek from Herkimer up to Poland. Collected at Newport, H. D. House, July 23, 1914. No. 5688. The golden or yellow loosestrife seems to have been early introduced in this region as an

ornamental plant and has become naturalized everywhere in the woods and thickets along West Canada creek. Also collected at Herkimer by Dr J. V. Haberer.

Serapias helleborine Linn.

Mohawk river flats near Little Falls. Mrs Loomis Burrell, July 23, 1914. Commonly supposed to be an introduced species from Europe, where it is common. In America it is now known from a number of localities in New York State ranging from Little Falls to Rochester. Its appearance in all these localities is that of a native plant and in the absence of any evidence as to its nonindigenous character should be regarded as a native species.

Cassia marilandica Linn.

Meadows and stream banks, near Newport. H. D. House, July 23, 1914. No. 5686.

3 MADISON COUNTY

Geum meyerianum Rydberg

(*Geum agrimonioides* C. Meyer, 1846, not Pursh, 1814)

Related to *Geum canadense*, but the basal leaves and lower stem leaves are pinnatifid and the stem is more hirsute. These characters are sometimes found in *Geum hirsutum* Muhl., but the petals in *G. meyerianum* are white and longer than the sepals, while in *G. hirsutum* they are pale yellow and much shorter.

Doctor Rydberg reports the species from Fleischmann, Delaware county, and from Orange county, and from Oneida (H. D. House, 1903) Madison county, in addition to which there is a specimen in the State herbarium from Troy, collected by E. C. Howe.

Apargia hispida (Linn.) Willd.

Waste grounds near Oneida. H. D. House, June 9, 1914. No. 5556.

Carex abacta Bailey

(*C. rostrata* Michx., *C. michauxiana* Boeckl.)

Borders of the sphagnum bog known as "Fiddler's green," Pecksport. H. D. House, July 27, 1914. No. 5761.

***Castanea dentata* Borkh**

Sandy loam soil in mixed woods, near Kenwood, 2 miles south of Oneida. H. D. House, July 21, 1914. *No.* 5685. The chestnut is not a common tree in central New York as most of the soils either contain too much lime or are derived directly from underlying limestone, a condition which seems to be inimical to the growth of the chestnut. So far as I know this is the only locality for the chestnut in Madison county, although it has been successfully planted in a number of places.

***Lonicera oblongifolia* (Goldie) Hooker**

Peterboro, in a sphagnum bog. H. D. House, June 11, 1914. *No.* 5547.

***Smilacina trifolia* Linn.**

Arbor Vitae swamps around the edge of sphagnum bogs, Peterboro. H. D. House, June 11, 1914. *No.* 5550. Pecksport, June 10, 1914. *No.* 5514.

***Kalmia polifolia* Wang.**

Sphagnum bog, Pecksport. H. D. House, June 10, 1914. *No.* 5525.

***Lonicera hirsuta* Eaton**

Dry thickets along edge of woods near Pecksport. H. D. House, July 27, 1914. *No.* 5736.

***Galium labradoricum* Wiegand**

Sphagnum bogs, Pecksport. H. D. House, June 10, 1914. *No.* 5517. Peterboro, June 11, 1914. *No.* 5549.

***Linnaea borealis* Linn.**

Woods near Pecksport in open places amongst mixed stands of hemlock and hardwoods. H. D. House, June 10, 1914. *No.* 5531. This species, known commonly as the "twin-flower," is fairly abundant throughout the mountainous parts of the State but is scarce or local elsewhere.

***Carex pseudo-cyperus* Linn.**

Swamps near Pecksport. H. D. House, July 27, 1914. *No.* 5742.

Eriophorum callitrix Cham.

Very abundant on the surface of the sphagnum bog known as "Fiddler's green," Pecksport. H. D. House, June 10, 1914. No. 5524.

Phyllitis scolopendrium (L.) Newm.

(*Scolopendrium vulgare* Sm.)

In the rich humus, covering the talus of limestone cliffs at Chittenango Falls, under the dense shade of mixed hardwoods and hemlock. H. D. House, June 9, 1914. No. 5509.

The species was first discovered at Chittenango Falls by Mr William Cooper about 1830 and remained until 1857 the only American station definitely known, although it was earlier discovered at Geddes, Onondaga county, by Frederick Pursh, on July 20, 1807. For many years it was supposed that Pursh's locality was the Chittenango Falls station until it was rediscovered at the Geddes locality in 1879 by members of the Syracuse Botanical Club. In July 1898, the fern was discovered at Perryville, Madison county, by Miss Murray Ledyard of Cazenovia.

A full and interesting history of the occurrence of this rare fern in America is given by Mr William R. Maxon in Fernwort Papers, pages 30-46, December 20, 1909.

Batrachium trichophyllum (Chaix.) F. Schultz

(*Ranunculus aquatilis* var. *trichophyllum* (Chaix.) A. Gray

In slow streams, near Pecksport. H. D. House, July 27, 1914. No. 5737.

Azalea nudiflora Linn.

In open woods along the edge of a swamp near Pecksport. H. D. House, June 10, 1914. No. 5523.

Coronilla varia Linn.

Common along roadsides between Clockville and Peterboro. A native of Europe and frequently introduced and escaped either by cultivation or by introduction with grain and grass seed. Commonly known as axseed or axwort.

Viola incognita Brainerd

Rich, rocky woodlands, Chittenango Falls. H. D. House, June 9, 1914. No. 5507. This long-neglected violet proves to be one of

the commonest species of the genus in rich, moist woodlands, while *Viola pallens* (*V. blanda* Auth. not Ait.) with which it was long associated, is confined to sphagnum or mossy swamps.

***Viola incognita* var. *forbsii* Brainerd**

Rich, moist woods, near Pecksport. H. D. House, June 10, 1914.
No. 5520.

***Rhodiola rosea* Linn.**

(*Sedum roseum* Scop., *Sedum rhodiola* DC.)

Limestone cliffs at Chittenango Falls. H. D. House, July 26, 1914. *No.* 5730. First collected here several years ago and determined by Dr B. L. Robinson. The colony of plants consists of less than a dozen individuals, tightly wedged in an almost inaccessible crevice of the cliff. The range of the species is chiefly subarctic, from Labrador to Maine and Vermont and northern Europe. The State herbarium contains in addition a specimen collected on the cliffs of the west side of Seneca lake, many years ago by Samuel H. Wright M. D., and which has seemingly passed unquestioned as *Sedum telephioides* Michx., which it was labeled. The fruit character, however, consisting of four erect folicles with their tips barely spreading, serves to distinguish it readily from *Sedum telephioides*, which possesses usually five distinctly spreading folicles. According to the books *Rhodiola rosea* has also been collected on the cliffs of the Delaware river in eastern Pennsylvania.

4 ONEIDA COUNTY

***Agrostis maritima* Lam.**

(*A. coarctata* Ehrh., *A. alba maritima* G. F. W. Mey.)

In dry sand along the shore of Oneida lake, Sylvan Beach. Dr J. V. Haberer, *no.* 1724, July 1900. H. D. House, *no.* 5615, June 1914.

***Azalea nudiflora* Linl.**

Sylvan Beach. H. D. House, *no.* 5486. June 8, 1914.

***Blephariglottis ciliaris* (L.) Rydb.**

Sylvan Beach. H. D. House, *no.* 5721. July 24, 1914. The golden-fringed orchid, as this species is commonly known, is rather rare north of the coastal region of the State. It has been collected at North Manlius, Onondaga county, by Dr Hermann Wibbe in 1871,

at Irondequoit, Monroe county, by Rev. L. Holzer in 1867, and is fairly abundant on the pine plains west of Albany, where it was first collected about 1830 by Lewis C. Beck and more recently by Dr Charles H. Peck.

Carex swanii (Fernald) Mackenzie

Sylvan Beach. H. D. House, no. 5699. July 24, 1914.

Cenchrus carolinianus Walter

Sandy fields near Fish Creek station, where perhaps introduced. H. D. House, no. 5832. August 10, 1914.

Chamaesyce humistrata (Engelm.) Small

Sylvan Beach, in sandy soil. H. D. House, no. 5641. July 20, 1914.

Ibidium gracile (Bigel.) House

Common in sandy fields and open woods near Sylvan Beach. H. D. House, no. 5620. July 20, 1914.

Lathyrus maritimus (Linn.) Bigelow

Common in sandy grassy places and open sandy woods along the shore of Oneida lake, north of Sylvan Beach. H. D. House, no. 5608. July 20, 1914.

Leptasea aizoides (Linn.) Haw.

Cliffs of Fish creek above Taberg, growing with *Primula mistassinica*, *Lobelia kalmii*, *Parnassia caroliniana* and many other moist clift-loving species. H. D. House, no. 5653. July 21, 1914.

Lythrium salicaria Linn.

Wet, marshy places along the shore of Oneida lake, near Sylvan Beach. H. D. House, no. 5613. July 20, 1914.

Nymphaea rubrodisca (Morong) Greene

Waters of Fish creek near Sylvan Beach. H. D. House, no. 5634. July 20, 1914. Said to be a hybrid between *N. variegata* and *N. microphylla*, which is quite possible since it is intermediate in appearance and both of the species mentioned are common here.

Its hybrid origin appears to be the more certain since it is not found in places where *N. microphylla* is absent. This is true of ponds like those in the swamps known as Fiddler's green, near Pecksport, Madison county, where *N. variegata* is very abundant.

***Nyssa sylvatica* Marsh.**

Low woods near Sylvan Beach. H. D. House, no. 5457. June 5, 1914.

***Parnassia caroliniana* Michx.**

Mossy dripping rocks and cliffs along Fish creek above Taberg. H. D. House, no. 5663. July 21, 1914.

***Plantago aristata* Michx.**

Sandy roadsides near Sylvan Beach, probably introduced. H. D. House, no. 5624. July 20, 1914.

***Polygala viridescens* Linn.**

Sandy fields and roadsides near Sylvan Beach. H. D. House, no. 5621. July 20, 1914.

***Populus deltoides* Marsh.**

Low woods about the eastern end of Oneida lake. H. D. House, no. 5473. June 5, 1914.

***Rhexia virginica* Linn.**

Very abundant in a low, sandy meadow north of Sylvan Beach. H. D. House, no. 5611, July 20, 1914. The species was reported from this locality many years ago by Kneiskern, and it also occurs westward along the northern shore of Oneida lake to Constantia, where it was found by Dr. George Vasey. These are the only localities in the State north of the coastal region which are known for the species.

***Silene dichotoma* Ehrh.**

Sandy fields near Fish Creek station and introduced. H. D. House, no. 5831, August 10, 1914.

***Verbascum lychnitis* Linn.**

Sylvan Beach. H. D. House, no. 5616, July 20, 1914. It is interesting to note what J. A. Paine, jr (Flora of Oneida County, 1865) says of this species.

"Barren sandy fields and copses on a ridge at the head of Oneida lake, parallel with the shore, beyond which are swamps. It is most abundant around the mouth of Fish creek. Here are the ruins of an old fort, which may account for the introduction of the plant. Two hybrids between this species and *V. thapsus*, one resembling the latter with a simple stem and yellow flowers, and the other the former with paniculate branches and white corollas, were observed by Kneiskern."

The ruins of the fort mentioned have disappeared, but the "white mullin" is still abundant there as are the hybrids mentioned, which may be described as follows:

***Verbascum lychnitis x thapsus*, hyb. nov.**

Flowers pale yellow in long terminal spikes or loosely paniced; leaves somewhat decurrent, stems angled; the two lower filaments of the flowers beardless like *V. thapsus*, the three upper ones clothed with whitish wool; flowers about 1.5 cm broad.

5 ONONDAGA COUNTY

***Mariscus mariscoides* (Muhl.) Kuntze**

Salt marshes, foot of Onondaga lake. Miss Mary Oliva Rust, September 19, 1883.

***Ruppia maritima* L. var. *onondagensis* Fernald & Wiegand**

Onondaga lake, J. A. Paine, jr, 1864 (in herbarium of New York State Museum), Dr J. V. Haberer, September 1878. The specimens collected by Paine are quite likely duplicates of the type of the variety *onondagensis*, described by Fernald and Wiegand in *Rhodora* 16: 126. 1914. The differences between the plants collected by Paine and Haberer and one from Coney island (T. F. Allen, 1864) are so slight, that the plants from Onondaga lake can scarcely be regarded as a distinct variety.

***Plantago major* Linn. var. *intermedia* (Gilbert) Des.**

Salt marshes near Onondaga lake. C. S. Sheldon, July 22, 1880. Also collected at Saranac lake and at Eastport, Long Island, by Peck.

***Carex eburnea* Boott**

Limestone ledges and open places. Green lake near Kirkville. H. D. House, June 6, 1914. No. 5478.

6 OSWEGO COUNTY

Carex incomperta Bicknell

(Carex sterilis Willd., in part)

In sphagnum under the shade of tamarack and spruce, "Lily marsh," H. D. House, July 30, 1914. No. 5797. New to State herbarium.

Carex howei Mackenzie

(Carex interior capillacea Bailey, Carex scirpoides capillacea Fernald, Carex delicatula Fernald)

Wet shady soil, shore of Lake Ontario, 3 miles east of Oswego. H. D. House, July 29, 1914. No. 5770.

Carex exilis Dewey

Sphagnum bog bordering Mud lake, Hannibal. H. D. House, June 27, 1914. No. 5599.

Carex limosa Linn.

Sphagnum bog bordering Mud lake, Hannibal. H. D. House, June 27, 1914. No. 5595. "Lily Marsh," July 30, 1914. No. 5796.

Agalinis paupercula (A. Gray) Britton

(Gerardia paupercula Britton)

Mud lake, Hannibal, in the sphagnum bog bordering the lake. C. S. Sheldon.

Utricularia intermedia Hayne

Mud lake, Hannibal. H. D. House, June 27, 1914. No. 5593.

Lonicera oblongifolia (Goldie) Hooker

Mud lake, Hannibal. H. D. House, June 27, 1914. No. 5583.

Triglochin maritima Linn.

Mud lake, Hannibal. H. D. House, June 27, 1914. No. 5585.

Eriophorum alpinum Linn.

Very abundant in the sphagnum bog bordering Mud lake, Hannibal. H. D. House, June 27, 1914. No. 5591.

Lepargyrea canadensis (Linn.) Greene

In thickets and open woods on the high bluffs facing Lake Ontario, west of Oswego. H. D. House, June 26, 1914. No. 5558.

Lychnis flos-cuculi Linn.

Sheldon's grove, Oswego. H. D. House, June 26, 1914. No. 5560.

Hieracium pratense Tausch.

Sheldon's grove, Oswego. H. D. House, June 26, 1914. No. 5562. This new addition to the flora of the State is a native of Europe and has already been noted at several places from eastern Quebec to southern New England. It bears a close resemblance to *Hieracium florintinum* All. but differs in having an elongated, slender rootstock and numerous leafy stolons, while *Hieracium florentinum* possesses a short, stout rootstock and is not stoloniferous. This new arrival of the "hawk weeds" is already abundant at Sheldon's grove and is spreading vigorously.

Mariscus mariscoides (Muhl.) Kuntze

(*Cladium mariscoides* Torrey)

Shores of Panther lake, H. D. House, August 4, 1914. No. 5824. The distribution of this species in central New York is decidedly local, and about the borders of most of the lakes where one would expect to find the species it is entirely lacking. It has been collected at Litchfield, Herkimer county, by Doctor Peck.

Lysias macrophylla (Goldie) House

(*Muhlenbergia* 1: 127. 1906)

(*Habenaria macrophylla* Goldie)

Moist woods under the shade of pine and hemlock. Panther lake. H. D. House, August 4, 1914. No. 5819. This species differs from *Lysias orbiculata*, chiefly in the greater length of the spur of the flower.

Lycopodium annotinum Linn.

Moist woods under the shade of pine and hemlock. Panther lake. H. D. House, August 4, 1914, No. 5826. This locality constitutes one of the few known stations of the State for this species outside of the Adirondack and Catskill mountain regions.

Isotria verticillata (Willd.) Rafinesque

In deep shade under spruce and tamarack bordering "Lily marsh," H. D. House, July 30, 1914, No. 5804.

Blephariglottis blephariglottis (Willd.) Rydberg

(*Blephariglottis blephariglottis* (Willd.) Rydberg)

Abundant in the open, sunny portions of the sphagnum bog known as "Lily marsh." H. D. House, July 30, 1914, No. 5792.

Populus deltoides Marshall

Shore of Lake Ontario, east of Oswego. H. D. House, July 29, 1914, No. 5778.

Populus candicans Aiton

Shore of Lake Ontario, east of Oswego. H. D. House, July 29, 1914, No. 5779. Large trees growing with *Populus deltoides*, *Populus balsamifera* and other hardwoods, appearing native but perhaps adventive. The origin of this species, which is common in cultivation and freely escaping, known popularly as the balm of Gilead, seems never to have been definitely settled, although it has been suggested that it has an Asiatic origin. It was described in 1829 by Desfontaines as *Populus ontariensis*, and there are numerous references to the species in literature which seems to indicate that the species is native to the Great Lakes region and westward to Montana, where the writer has seen it growing on the shores of Lake McDonald.

Nyssa sylvatica Marshall

Swamps and low woods along the shore of Lake Ontario, about 3 miles east of Oswego. H. D. House, July 29, 1914, No. 5768. Abundant and of large size. This is the most northerly locality for the species known in New York State.

Ranunculus obtusiusculus Rafinesque

(*Ranunculus alismaefolius* A. Gray)

(*Ranunculus ambigans* S. Wats.)

In a small marsh about 3 miles east of Oswego. H. D. House, July 30, 1914, No. 5807.

Stomoisia cornuta (Michx.) Rafinesque

(Utricularia cornuta Michx.)

Very abundant in the open sunny portions of the sphagnum bog known as "Lily marsh." H. D. House, July 30, 1914, No. 5786.

Potentilla recta Linn.

Fields and waste places about Oswego. H. D. House, July 29, 1914, No. 5785.

Centaureum centaurium (Linn.) W. F. Wight

(Erythraea centaurium Persoon)

Roadsides and embankments about Oswego. H. D. House, July 29, 1914, No. 5771. Introduced and naturalized about the port of Oswego many years ago (specimen in the Beck herbarium dated August 10, 1830) and spreading in various directions. It has been observed as far south as Fulton and Syracuse and several miles eastward. Possessing none of the obnoxious features of a weed, it forms an interesting addition to our emigrant flora. For many years Oswego was the only known American station for this species, but it is now known from many places throughout the eastern states.

Lathyrus myrtifolius Muhlenberg

Moist thickets near the shore of Lake Ontario, west of Oswego. H. D. House, July 29, 1914, No. 5783.

Drosera intermedia Hayne

Very abundant in the open, sunny portions of the sphagnum bog known as "Lily marsh." H. D. House, July 30, 1914, No. 5788.

Rhynchospora macrostachya Torrey

Mud lake, Hannibal. Dr Herman Wibbe, September 1877. This specimen occurs in the Sheldon herbarium recently donated to the State Museum, and constitutes an outlying station for a species fairly abundant in the coastal plain region farther south. The only other specimens in the State herbarium from this State were collected at Wading River and Smithtown, Long Island.

NEW YORK SPECIES OF MARASMIUS

L. H. PENNINGTON PH.D.

Professor of Botany in Syracuse University, Syracuse, New York

Many species of *Marasmius* occupy a unique position as the xerophytes among the Agarics. They play an important rôle in the formation of humus, since among the higher fungi they are the first to attack and begin the decomposition of leaves, twigs etc. which fall into situations not moist enough to permit the growth of ordinary humus forming fungi. For example, *Marasmius androsaceus* (L.) Fr. grows upon dead pine needles upon ledges of rock and other exposed situations where the rain water runs off or dries up quickly, and *Marasmius minutus* Peck may be found upon dead leaves before they have fallen to the ground. The ability of the dried plants to revive readily when moistened makes it possible for them to take advantage of every moist period, no matter how short, to continue their growth.

Although many species of *Marasmius* are among the first fungi to begin the decay of plant tissues, very few of them are parasitic, and therefore they play but a small part in causing plant disease. In the tropics a few species as *M. sacchari* Wakker, and *M. plicatus* Wakker are known to cause serious rootrot in sugar cane. *M. caryophylleus* (Schaeff.) Schröt., the common fairy ring mushroom, has been shown to be a weak parasite upon roots and underground stems of grasses. The grass is at first stimulated to produce a more vigorous growth with a darker green color than usual. It may then die thus making it possible, even when the fungus is not visible, to detect its presence in lawns by the bare spots where it has killed the grass.

M. caryophylleus is practically the only species of *Marasmius* which is commonly used as a food. This species is highly esteemed by many people and is considered equal to any other mushroom for the table. *M. alliatus* (Schaeff.) Schröt., which has the odor and taste of onions, is said to be used in European countries to flavor other dishes. Several species have a bitter or acrid taste and are considered as poisonous. Some have both a disagreeable odor and taste.

Seventy-one species of *Marasmius* are known in temperate North America. Fifty-five of these have been described or reported from New York State, the majority of them by the illustrious former State Botanist Dr Charles H. Peck. Seventeen species are considered as common to both Europe and North America. Further

study will probably show that more of our American species are common to both continents. In a few instances where there has been confusion of names, American names have been retained for species which are apparently found in Europe also.

A more complete account of the North American species of *Marasmius* is to be found in vol. 9, pt. 4 of the North American Flora (1915).

A few species, as *M. nigripes* (Schw.) Fr. and *M. foetidus* (Sow.) Fr., are somewhat gelatinous when they are fresh and moist. They have therefore sometimes been considered as belonging to the genus *Heliomyces*. Since the species of *Heliomyces* are practically confined to the tropics and the above-named species resemble species of *Marasmius* more than they resemble the typical species of *Heliomyces*, they are here retained in the genus *Marasmius*.

The Fresian system of classification has not been found to be entirely practicable for our species. The general arrangement of the species from the large *Collybia*-like forms down to the small forms with the tough bristlelike stipe is very similar to the usual arrangement. Rather more attention, however, has been paid to the stipe with respect to its surface, whether rough and hairy or smooth and shining, than to the character of the pileus. At its best any system of classification is more or less artificial. The present arrangement will serve its purpose if it helps the student to identify the species of *Marasmius* as he finds them.

Marasmius Fries

Gen. Hymen 9. 1836

Pileus tough, fleshy to membranous, either continuous with the stipe or of a different texture, surface often sulcate or striate, not zonate, dry, glabrous or rarely minutely tomentose or pruinose, margin involute or straight in young plants, becoming broadly convex, plane or uplifted with the disk elevated or depressed, rarely umbilicate; context more or less tough and dry, sometimes soft fleshy but not brittle, dry plants reviving when moistened; lamellae dry, rather thin, often of unequal length, often interveined, but seldom forking, developing slowly, rarely remaining very narrow, almost veinlike; color varying from white to yellow, reddish or purplish, often changing in dry plants; stipe central, seldom fleshy, tough, horny, stuffed or hollow, often slender or capillary, sometimes solid, glabrous or more or less tomentose, hairy, or strigose;

spores white, smooth (angular in *M. nigripes*) (Schw.) Fr. elliptic, rarely globose when mature, usually more or less obliquely apiculate, maturing slowly and unequally so that it is often difficult to find mature spores in dried plants. The plants usually grow upon vegetable matter, grass, leaves, twigs, bark, wood etc., but very seldom upon soil.

Key to Species

I Pileus fleshy or subfleshy, 1 cm or more broad; stipe more or less tomentose or hairy, at least below; lamellae free or adnexed. Some large plants with nearly smooth stipe are placed in this section.

- Pileus white 34 *M. phyllophilus*
- Pileus not white, sometimes pallid in dried plants
 - Plants large, pileus 2 cm or more broad
 - Lamellae crowded
 - Plants with odor and taste strong of onions
 - Spores small 1 *M. polyphyllus*
 - Spores 12-14 μ long..... 2 *M. prasioemus*
 - Plants with neither odor nor taste of onions
 - Stipe smooth above..... 6 *M. fasciatus*
 - Stipe more or less tomentose throughout
 - Lamellae free, remote; stipe enlarged at the apex..... 3 *M. confluens*
 - Lamellae adnexed; stipe not enlarged at the apex
 - Stipe long and twisted; pileus usually pallescent..... 4 *M. archiropus*
 - Stipe not long and twisted; pileus brown 5 *M. multifolius*
 - Lamellae not crowded
 - Taste strong and acrid; lamellae usually becoming reddish
 - Pileus purple..... 9 *M. iocephalus*
 - Pileus not purple
 - Lamellae broad..... 7 *M. peronatus*
 - Lamellae narrow
 - Stipe long..... 8 *M. subnudus*
 - Stipe short..... 10 *M. rubrophyllus*
 - Taste neither strong nor acrid
 - Lamellae free, usually growing in lawns or grassy places..... 11 *M. caryophylleus*
 - Lamellae adnexed, growing in woods
 - Stipe spongy, thickened at base..... 12 *M. spongiosus*

- Stipe short, neither spongy nor thickened at base
- Lamellae not dark in dry plants.. 13 *M. dichrous*
- Lamellae becoming brown or reddish 10 *M. rubrophyllus*
- Plants smaller, pileus rarely 2 cm broad
- Stipe white or entirely covered with a white tomentum..... 39 *M. olneyi*
- Stipe not entirely white or covered with a white tomentum
- Pileus umbonate..... 16 *M. umbonatus*
- Pileus not umbonate
- Odor or taste strong or disagreeable
- Lamellae annulate-adnexed; pileus umbilicate and striate..... 14 *M. foetidus*
- Lamellae not annulate-adnexed; pileus not umbilicate; odor of onions 2 *M. prasiomus*
- Odor or taste neither strong nor disagreeable
- Stipe slender, long-radically; pileus red 15 *M. elongatipes*
- Plants not as above
- Stipe strigose-tomentose, at least in the lower part
- Pileus striate or plicate
- Stipe nearly smooth and dark above 17 *M. semihirtipes*
- Stipe white-pubescent above. 18 *M. biformis*
- Pileus smooth, not striate
- Some of the lamellae subdecurrent, darker in dry plants 19 *M. contrarius*
- Lamellae not decurrent, usually pallescent
- Stipe glabrous above..... 17 *M. semihirtipes*
- Stipe not glabrous above
- Lamellae rather broad, adnexed 12 *M. spongiosus*
- Lamellae narrow, adnate. 20 *M. velutipes*
- Stipe not strigose-tomentose
- Margin of pileus little, if at all, striate
- Stipe thickened upward; base tuberculose 13 *M. dichrous*
- Stipe neither thickened upward, nor tuberculose
- Stipe long..... 8 *M. subnudus*
- Stipe short..... 10 *M. rubrophyllus*
- Margin of pileus striate or plicate
- Stipe long, even..... 8 *M. subnudus*
- Stipe short, thickened upward 13 *M. dichrous*

- II Pileus subfleshy to membranous; stipe smooth
 pruinose, or subtomentose; lamellae squarely
 adnate or decurrent, free in a few small
 plants with tomentose stipe
- Pileus white
- Lamellae decurrent
- Pileus papillate
- Spores 10 μ or more long..... 21 *M. magnisporus*
- Spores less than 10 μ long
- Lamellae close..... 27 *M. papillatus*
- Lamellae distant..... 22 *M. languidus*
- Pileus not papillate
- Lamellae broad
- Stipe bulbous; growing upon soil and
 buried twigs; spores 7-9 μ long.... 23 *M. vialis*
- Stipe increasing upward; growing
 upon wood or other vegetable de-
 bris; spores 10-12 μ long..... 21 *M. magnisporus*
- Lamellae narrow
- Lamellae and stipe with minute resin-
 ous particles or hairs..... 24 *M. resinosus*
- Lamellae and stipe without resinous
 particles or hairs..... 25 *M. salignus*
- Lamellae not decurrent
- Cystidia present..... 29 *M. squamula*
- Cystidia absent
- Spores irregularly angular..... 26 *M. nigripes*
- Spores not angular
- Odor strong..... 28 *M. perforans*
- Odor not strong
- Stipe hollow, base swollen above and
 contracted to a point below..... 31 *M. praeacutus*
- Stipe of uniform thickness
- Stipe very short, upon herbaceous
 plants in swamps..... 30 *M. caricicola*
- Stipe not very short
- Pileus not distinctly striate or
 plicate
- Stipe pallid..... 32 *M. opacus*
- Stipe becoming reddish..... 33 *M. ramulinus*
- Pileus distinctly striate or pli-
 cate
- Lamellae narrow, adnexed.. 34 *M. phyllophilus*
- Lamellae broadly adnate..... 35 *M. insititius*
- Pileus not white
- Lamellae decurrent
- Pileus yellow to ferruginous..... 36 *M. tomentosipes*
- Pileus not yellow or ferruginous
- Stipe glabrous above..... 37 *M. alienus*

- Stipe not glabrous above..... 19 *M. contrarius*
 Lamellae not decurrent
 Pileus small, 2mm or less broad
 Plant minute, pubescent..... 43 *M. minutissimus*
 Plant not pubescent
 Pileus smoky-brown, smooth..... 41 *M. concinnus*
 Pileus pale straw color, striate..... 42 *M. cucullatus*
 Pileus more than 2 mm broad
 Stipe beset with white or tawny hairs... 15 *M. elongatipes*
 Stipe not beset with hairs
 Stipe brown or blackish..... 35 *M. insititius*
 Stipe not brown or blackish
 Stipe glabrous; pileus reddish-brown 38 *M. leptopus*
 Stipe farinaceous or subtomentose
 Pileus white with a reddish disk
 Stipe contracted to a point below 31 *M. praeacutus*
 Stipe not contracted to a point below 40 *M. ramealis*
 Pileus rufescent..... 39 *M. olneyi*
 Pileus pale-yellowish-brown then whitish, plicate-striate..... 35 *M. insititius*
 III Pileus usually membranous; stipe smooth and shining except in a few small plants with a pileus less than 5 mm broad
 Plants small; pileus usually less than 3 mm broad
 Pileus white
 1-2 mm broad, smooth..... 44 *M. filipes*
 Small, less than 1 mm; hairy under a lens. 43 *M. minutissimus*
 Pileus not white
 Stipe pale straw colored..... 42 *M. cucullatus*
 Stipe neither yellow nor straw colored
 Stipe blackish brown, shining..... 45 *M. minutus*
 Stipe pallid, brownish below
 Cystidia present..... 46 *M. pirinus*
 Cystidia absent..... 47 *M. thujinus*
 Stipe white..... 41 *M. concinnus*
 Plants larger; pileus usually over 3 mm broad
 Pileus fleshy or subfleshy
 Plants with odor of onions..... 48 *M. alliatus*
 Plants without odor of onions
 Pileus white or light yellow
 Stipe brown, mycelioid; cystidia present 50 *M. delectans*
 Stipe reddish brown, not mycelioid; cystidia absent..... 49 *M. calopus*
 Pileus not white or light yellow
 Cystidia present; lamellae broad..... 51 *M. glabellus*
 Cystidia absent..... 52 *M. bellipes*

Pileus membranous

Pileus white

Lamellae attached to a free collar..... 53 *M. rotula*

Lamellae not attached to a free collar

Stipe black, paler at apex..... 56 *M. albiceps*Stipe pale, straw colored..... 57 *M. straminipes*

Pileus not white

Lamellae attached to a free collar

Pileus alutaceous to umber, umbilicate 54 *M. capillaris*Pileus reddish white, umbonate..... 55 *M. graminum*

Lamellae not attached to a free collar

Pileus ochraceous, ochraceous-red, or
brownCystidia present..... 51 *M. glabellus*Cystidia absent..... 58 *M. siccus*

Pileus not colored as above

Lamellae purplish gray..... 61 *M. melanopus*

Lamellae not purplish gray

Pileus campanulate, maroon or
vinous red..... 59 *M. pulcheripes*Pileus convex to plane or de-
pressedPileus red-brown or vinous red. 45 *M. minutus*Pileus fuscous, pinkish, or
rarely whitish..... 60 *M. androsaceus***1 *Marasmius polyphyllus* Peck**

Ann. Rep't N. Y. State Mus., 51: 286. 1898.

Pileus fleshy, thin, convex or nearly plane, gregarious or cespitose, 2.5-5 cm broad; surface smooth, whitish to pale reddish brown, disk darker in dried plants; context having the odor and taste of onions; lamellae adnexed or nearly free, very crowded, narrow, white, becoming yellowish in dried plants; spores minute, 5-6 by 3-4 μ ; stipe equal, hollow, 4-7 cm long, 2-4 mm thick, reddish brown, covered with a white tomentum which is more abundant toward the base.

Shaded damp ground. Minerva, Essex county. July 1st.

Peck says "the peculiar garliclike flavor of this mushroom remains in the mouth a long time after tasting the flesh. This species is closely related to *M. prasiopus* Fr. from which it differs in its larger size, more crowded lamellae and smaller spores." It is interesting to note that Ricken's description of *M. prasiopus* (Die Blätter. Deutschl.) differs little from this except in the size of the plant. It has been suggested that *M. polyphyllus* may be known in Europe as *M. prasiopus*.

2 *Marasmius praiosmus* Fr.

Epicr. Myc. 376. 1838.

Pileus submembranous, soft, campanulate, convex, expanded, obtuse, gregarious, 2-4 cm broad; surface rugulose-sulcate, glabrous, whitish or yellowish, disk darker; context with a strong odor of onions; lamellae attached, subcrowded, narrow, white; spores white, 12-15 by 3-4 μ ; stipe fistulose, pallid, glabrous above, subtomentose and thickened downward, pallid, then rufous or fuscous, 5-8 cm long, 2 mm thick.

Upon old leaves in woods.

3 *Marasmius confluens* (Pers.) Ricken

Blätter. Deutsch. 72. 1911.

Fries, Epicr. Myc. 88. 1838 (As *Collybia confluens* (Pers.) (Fr.)

Pileus subfleshy, dry, broadly convex to plane, cespitose, 1.5-3.5 cm broad; surface smooth, pinkish brown, becoming yellowish brown or almost white in dry plants; margin thin, often involute even in old, dried plants; lamellae narrow, crowded, free, remote, white or slightly discolored in age; spores 7-8 by 3-3.5 μ ; stipe equal, enlarged at the apex, hollow, brown, covered everywhere with dense white tomentum, bases of several plants bound together with dense whitish mycelium, 4-12 cm long, 2-5 mm thick.

Among dead leaves or moss. Common.

This species has generally been considered as a *Collybia* although it was recognized as having the characteristics of a *Marasmius*. Peck (Ann. Rep't N. Y. State Mus., 49:61) says "They revive under the influence of moisture and thereby indicate an intimate relationship to the genus *Marasmius*." Ricken l. c. describes this species as having cystidia which are lacking in our plant.

4 *Marasmius archyropus* (Pers.) Fr.

Epicr. Myc. 378. 1838.

Piles subfleshy, tough, convex to plane and depressed, gregarious or cespitose by the union of several plants by masses of mycelium at the base, 2-3 cm broad; surface alutaceous, pallascent, often becoming nearly white, glabrous; margin thin, involute, except in the mature plants, even, smooth; context moderately thin, tough, whitish; lamellae white, yellowish when dry, adnexed, crowded, narrow; spores 8 by 4 μ ; stipe pale reddish, usually appearing gray

or white with a pruinose or tomentose coat, firm, rigid, stuffed or hollow, 11–14 cm long, 2–3 mm thick.

Among dead leaves in woods. Rather common.

This species is closely related to both *M. confluens* (Pers.) Ricken and to *M. multifolius*, Peck. From the former it may be distinguished by its longer, usually twisted stipe which is not enlarged at the apex and by the adnexed lamellae. It is not usually as densely cespitose as *M. confluens*. From *M. multifolius* it is distinguished by its longer stipe and the pallescent character of the pileus.

5 *Marasmius multifolius* Peck

N. Am. Flora, v. 9, pt 4, p. 270, 1915

Pileus subfleshy, tough, convex to plane, 2–3 cm broad; surface smooth, not striate, isabelline to pale fulvous, not fading in dry plants; lamellae narrow, crowded, adnate, white, changing but little in dry plants; spores 6 by 2.5–3 μ ; stipe white-villous, firm, stuffed or hollow, 4–6 cm long, 2 mm thick.

Upon dead leaves in woods. Not common.

This seems to be a fairly distinct species which Peck collected several times and which he was apparently ready to publish as a new species. It differs from *M. confluens* (Pers.) Ricken in its adnate lamellae and in its not being densely cespitose.

6 *Marasmius fasciatus* Pennington

Ann. Rep't N. Y. State Mus., 24:76. 1872 (As *M. anomalus* Peck (not *M. anomalus* Lasch.).

Pileus subfleshy, tough, broadly convex to nearly plane, often subumbonate, densely cespitose, 2–4 cm broad; surface even, glabrous, reddish to tan, fading nearly to white in dried plants; lamellae rather close, narrow, adnexed, narrowed behind, white, sometimes reddish yellow in dried plants; spores 5–6 by 2.5–3 μ ; stipe cartilaginous, even, hollow, smooth above, bound together below by dense white mycelium; reddish to dark red or almost black, 3–6 cm long by 2–3 mm thick.

Upon decayed wood and humus in forest. Not uncommon.

The original description of this plant was made from two rather immature plants. The description given above has been modified to agree with later collections and notes of Peck's. This is very close to European specimens distributed as *M. lupuletorum* (Weimm) Bres.

7 *Marasmius peronatus* (Bolt.) Fr.

Epicr. Myc. 375. 1838.

Pileus subfleshy, tough, broadly convex, sometimes subumbonate, 2-6 cm broad, surface rich brown with a reddish tint in dried plants, glabrous; margin lighter than the disk, smooth, somewhat irregular; context tough, coriaceous, whitish, the taste unpleasant, acrid; lamellae pallid to reddish, close, rather broad, adnexed; spores ovoid, 6-8 by 3-4 μ ; stipe flavid to subrufous, equal, often compressed, villous-corticate, personate-strigose at the base.

Upon dead leaves in woods. Rare.

This species, which is often considered as identical with *M. urens* (Bull.) Fr. and is called *M. urens-peronatus* in Europe, seems to be very rare in America, although both forms have been rather frequently reported. The American specimens which most closely resemble those of Europe come from California. A few of Peck's collections are near enough to the European plants to pass as *M. peronatus*. Some of our collections may prove to be *M. putillus* Fr.

8 *Marasmius subnudus* (Ellis) Peck

Ann. Rep't N. Y. State Mus., 51:287. 1898.

Pileus subfleshy, thin, tough, flexuous, broadly convex to plane, gregarious or subcespitose, 2-4 cm broad; surface brownish red, dingy bay or russet, smooth, margin even, smooth or subtriate; context thin, tough, white, the taste unpleasant, bitter; lamellae pallid or yellowish, becoming darker in dried plants, narrow, subdistant, slightly adnexed or free, becoming remote in old, dried plants; spores 8-10 by 4.5 μ ; stipe reddish brown to nearly black, covered with a dense white tomentum or nearly naked at the apex, slender, firm, equal, solid or stuffed, 4-8 cm long, 2-4 mm thick.

On ground among leaves and other vegetable debris in woods. Common.

This is undoubtedly one of the species that has often been reported as *M. peronatus* (Bolt.) Fr. or *M. urens* (Bull.) Fr.

9 *Marasmius iocephalus* (Berk. & Curt.) PenningtonAnn. Mag. Nat. Hist. 11, 12:420. 1815 (*Mycena iocephala* Berk. & Curt.).

Pileus submembranous to membranous, broadly convex, gregarious or subcespitose, 1.5-4 cm broad; surface striate or sulcate, violet,

bluish gray at times in dried plants; context with a strong odor; lamellae adnate, distant, rather narrow, paler than the pileus; spores 7 by $3.5\ \mu$; stipe attenuate upward, densely tomentose above, strigose below, white or yellowish, 4–5 cm long, 2–4 mm thick.

Upon dead leaves in woods and swamps. South eastern part of the State. Rare.

Peck has called New York specimens of this plant *M. peronatus* (Bolt) Fr. Ellis called this plant *M. carneo-purpurens*, but does not, however, seem to have published a description of the species. The purplish pileus and the strigose stipe plainly characterize the plant.

10 *Marasmius rubrophyllus* Pennington

North American Flora; v. 9, pt 4, p. 27. 1915

Pileus subfleshy, tough, broadly convex to nearly plane, often slightly depressed, gregarious, 1–4 cm broad; surface dry, smooth, reddish brown to dark alutaceous; margin even; lamellae adnexed or adnate, moderately close, narrow, reddish, becoming reddish brown in dried plants; spores 7 by $3.5\ \mu$; stipe firm, even, short, reddish brown, uniformly covered with a white down or pruinose coat, 2–3 cm long, 1–2.5 mm thick.

Upon bark or wood, rarely among dead leaves. Rare.

This species has been called *M. peronatus* (Bolt.) Fr. in some local lists and *M. planicus* Fr. and *M. erythropus* (Pers.) Fr. in others.

11 *Marasmius caryophylleus* (Schaeff.) Schröt.

Krypt. Fl. Schles., 3:561. 1889.

Fries, Epicr. Myc. 375. 1838 (As *M. oreades* (Bolt) Fr.).

Pileus fleshy, tough, convex, plane or subumbonate, 3–5 cm broad; surface white to pale tan or reddish pallescent, glabrous; margin at first involute, smooth, even, sometimes reflexed in age or in dried plants; context somewhat tough, thick at the disk, whitish, the taste pleasant, the odor fragrant; lamellae white, yellowish when dry, broad, distant, free; spores 7–9 by $4\text{--}5\ \mu$; stipe pallid, solid, corticate, with a villous, interwoven cuticle, appearing nearly smooth or slightly villous-pubescent, 4–5 cm long, 2–4 mm thick.

Upon lawns and grassy places. Common.

The coming "fairy ring" mushroom is practically the only species of *Marasmius* that is used for food. It has a wide distribution and is highly esteemed by the mycophagist. It has been shown that it is partially parasitic upon grass, often slowly killing it out in small areas.

12 *Marasmius spongiosus* Berk. & Curt.

Jour. Bot. & Kew Misc. 172. 1849.

Pileus fleshy, broadly convex, obtuse or plane, 1-3 cm broad; surface whitish fuscous, whitish brown, or tan, the center darker; lamellae slightly adnate, subcrowded, moderately broad, whitish; spores 7-9 by 3-4 μ ; stipe 5-10 cm long, 2-4 mm thick, furfuraceous-pulverulent to villous, the base thickened, more or less spongy, tawny to dark brown or almost black, often rooting, the rooting portion being 3-5 cm long.

Among leaves and other vegetable debris in woods. Rather common.

There is much variation in size in this species where it is found in different localities. It is possible that two or more species are confused under this name. Since there are all gradations from large to small plants, size alone can scarcely be taken as a basis for distinguishing separate species. The smooth pileus, tawny to dark brown, villous stipe, which is often spongy or rooting at the base, and the light-colored lamellae characterize our plant. *M. semisquarrosus* Berk. & Cooke does not seem to be distinct. *M. spongiosus* may possibly be known in Europe as *M. erythropus* (Pers.) Fr. It is at least very close to *M. erythropus* (Pers.) Fr. [Ic. Hymen. pl. 174, fig. 2, and Cooke, Brit. Fungi pl. 1123, B(1077.B).]

13 *Marasmius dichrous* Berk. & Curt.

Ann. Mag. Nat. Hist. II, 12:426.

Bul. Buffalo Soc. Nat. Sci., 1:58. 1873 (As *Marasmius caespitosus* Peck).

Jour. Cinc. Soc. Nat. Hist., 6:192. 1883 (As *Marasmius fagineus* Morgan).

Pileus subfleshy, convex, at length plane or depressed, 2-4 cm broad, gregarious or caespitose; surface not polished, dry, nearly smooth to rugose-striate, reddish or purplish pallid to alutaceous, becoming brown in dried plants; lamellae adnate, often becoming nearly free, close, narrow in front, often crisped, pale reddish;

spores often guttulate, 8–10 by 4.5–5 μ ; stipe short, hollow, thickened upward, the base subtuberculose, reddish pallid, brown or dark reddish brown, pruinose or slightly pubescent at the base, 1–3 cm long, 2 mm thick.

Upon twigs, bark, wood and other vegetable debris in woods. Rather common.

M. dichrous is usually found upon bark or wood. The smoky brown color of the pileus in dried plants and the short stipe with its slightly tuberculose base are generally sufficient to characterize this species.

14 *Marasmius foetidus* (Sow.) Fr.

Epicr. Myc. 380. 1838.

Ann. Rep't N. Y. State Mus., 55:648. 1889 (As *Marasmius acerinus* Peck).

Pileus submembranous, soft, convex, then explanate, umbilicate, 10–20 mm broad, surface subpruinose, fulvo-badius or fox-brown, fading in dry plants; margin striate-plicate; at first involute, lax or dropping; context with a strong, disagreeable odor; lamellae annulate-adnexed, not broad, distant, reddish yellow; spores 7–8 by 4 μ ; stipe pruinose, base minutely floccose, hollow, spadiceous, darker below, 1–2.5 cm long, 2 mm thick.

Upon dead branches and other vegetable debris in woods.

Rather common, widely distributed in northeastern United States and Canada; also in Europe. Since the disagreeable odor is not marked except in moist or very fresh plants, collections of *M. foetidus* are frequently referred to other species.

15 *Marasmius elongatipes* Peck

Bul. Buffalo Soc. Nat. Sci., 4:181. 1883.

Ann. Rep't N. Y. State Mus., 26:66. 1874 (As *Marasmius longipes* Peck).

Bot. Sur. Neb., 4:20. 1896 (As *Marasmius hirtipes* Clements).

Pileus thin, submembranous, convex, 8–13 mm broad; surface glabrous, finely striate, fulvous-red; lamellae narrow, adnexed, not crowded, white; spores 7–8 by 3.5 μ ; stipe equal, long, slender, radicate, hollow, brown or alutaceous, white at apex; pruinose to white-tomentose, often with white hairs, 5–13 cm long, 1 mm thick.

Upon ground among dead leaves in woods. Common.

This species varies especially in respect to the long radicating stem which may appear brownish tomentose or brown with minute

white hairs. Specimens of *M. chordalis* Fr. from Sweden seem to be very close to *M. elongatipes* except that the texture of the stipe is more firm in *M. elongatipes* than in *M. chordalis*.

16 *Marasmius umbonatus* Peck

Bul. Buffalo Soc. Nat. Sci., 1:58. 1873.

Pileus thin, tough, expanded, umbonate, gregarious, 13–19 mm broad; surface glabrous, alutaceous, margin smooth or substriate, at first incurved; lamellae interveined, branched in front, reaching the stipe, subdistant, narrow, white; spores 7–8 by 3.5 μ ; stipe equal, solid, fulvous above, pallid below, velvety tomentose, 2.5–4 cm long, 1 mm thick.

Among needles of coniferous trees. Not common.

17 *Marasmius semihirtipes* Peck

Bul. Buffalo Soc. Nat. Sci., 1:57. 1873.

Pileus thin, tough, convex to nearly plane or depressed, 1–2 cm broad; surface glabrous, reddish brown, becoming alutaceous, the disk darker, margin sometimes striate; lamellae slightly adnexed, subdistant, not narrow, white; spores 8–9 by 4.5 μ ; stipe equal, even or finely striate, tubular, reddish brown, often nearly black in dry plants, glabrous above, velvety tomentose toward the base, 3–5 cm long, 1–2 mm thick.

Upon ground among dead leaves etc., in woods. Rather common.

Marasmius semihirtipes varies considerably in color and striation of the pileus and in the color and roughness of the stipe.

18 *Marasmius biformis* Peck

N. Y. State Mus. Bul. 67, p.25. 1903.

N. Y. State Mus. Bul. 105, p.25. 1906) (As *Marasmius longistriatus* Peck).

Pileus submembranous, thin, campanulate or nearly plane, often becoming umbilicate, gregarious, 8–16 mm broad; surface glabrous, hygrophanous, striatulate when moist, rugose-striate when dry, bay-red or pale chestnut when moist, grayish when dry, lamellae adnate and joined together at the stipe, rather close, not broad, grayish or creamy yellow; spores 5–6 by 3.5 μ ; stipe even, slender, brown

when moist, cinereous when dry, densely downy-pubescent, base often tawny, 2.5 cm long, 1 mm thick.

Under coniferous trees. Infrequent.

Peck (N. Y. State Mus. Bul. 67, p. 25. 1903) says: "The species is closely related to *M. subnudus*, (Ell.) Pk. but the plant is much smaller, the pileus is usually umbilicate and the stem not inserted. The mycelium binds together a mass of dirt and needles which adhere to the base of the stem when the plant is taken from the ground. In some groups nearly all the pilei are campanulate, in others they are nearly plane. This feature is suggestive of the specific name." A comparison of types and descriptions forces one to the conclusion that *M. biformis* and *M. longistriatus* are too nearly identical to be regarded as distinct species.

19 *Marasmius contrarius* Peck

N. Y. State Mus. Bul. 150, p.34. 199.

Pileus submembranous, tough, broadly convex or nearly plane, gregarious, 4-10 mm broad; surface often uneven, glabrous, whitish or white with brown center, becoming grayish or sub-alutaceous in drying; lamellae adnate or slightly decurrent, sub-distant, thin, sometimes branched or irregular, interspaces slightly venose, whitish; spores 7-9 by 4-5 μ ; stipe slender, white within, solid, grayish-tawny, downy, tomentose at base, 2-3 cm long, 1-1.5 mm thick.

Damp mossy places under spruce and balsam trees. Not common.

20 *Marasmius velutipes* Berk. & Curt.

Ann. Mag. Nat. Hist. III, 4:295. 1859.

Pileus submembranous, tough, plane or umbilicate, gregarious, 8-20 mm broad, surface dull chestnut to ochraceous brown, lighter or pallescent at the center, smooth; margin at first involute, thin, even, smooth, often becoming striate; context thin, tough, white or whitish; lamellae white, becoming yellowish, narrow, close, adnate; spores 6.5 by 4-4.5 μ ; stipe reddish brown, covered above with whitish tomentum, below with tawny yellow to brown hairs, flexuous, equal or swollen and spongy below, hollow, often rooting, 3-5 cm long, 1-2 mm thick.

Among dead leaves of deciduous trees. Rather common.

21 *Marasmius magnisporus* Murrill

Mycologia 4:166. 1912.

Ann. Rep't N. Y. State Mus., 41:85. 1888 (As *M. salignus major* Peck).

Pileus thin, tough, convex, at times umbonate, cespitose or closely gregarious, 1-1.5 cm broad; surface glabrous, white to pale isabelline with a pinkish tint; margin sometimes slightly striate; lamellae squarely adnate or decurrent, distant, broad, strongly interveined, inserted, white, entire; spores oblong, 10-12 by 4-6 μ ; stipe increasing upward, tough, grayish avellaneous below, paler above, minutely striate, pruinose to glabrous, 1-3 cm long, 2 mm thick.

Upon dead wood. Not common but widely distributed over the temperate parts of North America.

Marasmius magnisporus has probably been reported from many parts of America and possibly from Europe as *M. candidus* (Bolt.) Fr. and *M. languidus* (Lasch.) Fr.

22 *Marasmius languidus* (Lasch.) Fries

Epicr. Myc. 379. 1838.

Pileus subfleshy, convex, gibbous or umbilicate, 1-2 cm broad; surface flocculose, white, pallid, margin rugose-sulcate; lamellae adnate-decurrent, interveined, distant, narrow; spores 6 by 4 μ ; stipe increased above, stuffed, pallid, brownish below, surface naked, 2.5 cm long, 1-2 mm thick.

Upon dead stems, grass, leaves etc. Rare.

23 *Marasmius vialis* Peck

Ann. Rep't N. Y. State Mus., 51:287. 1898.

Pileus membranous, convex, 4-10 mm broad; surface pruinose, white; lamellae decurrent, distant, arcuate, white, becoming yellow-brown in dried plants; spores 7-9 by 4-4.5 μ ; stipe bulbous, short, solid, tough, substance white then brown or black, surface white-pruinose, 12-20 mm long, 1 mm thick.

Upon dead roots and twigs buried in damp ground. Not common.

24 *Marasmius resinosus* (Peck) Sacc.

Syll., 5:522. 1887.

Ann. Rep't N. Y. State Mus., 24:88. 1872 (As *Marasmius decurrens* Peck).

N. Y. State Mus. Bul. 67, p.38. 1903 (As *Marasmius resinosus nivens* Peck).

N. Y. State Mus. Bul. 94, p.40. 1905 (As *Marasmius resinosus candidissimus* Peck).

Pileus thin, convex, subcespitose, 8-13 mm broad; surface minutely tomentose, pure white, becoming yellowish when dry; lamellae arcuate-decurrent, interspaces rugose-reticulate, subdistant, narrow, tapering toward each end, white, the edges discolored; spores 6-7 by 4 μ ; stipe slender, firm, equal, white, surface minutely tomentose, 2.5-5 cm long, 1 mm thick. The stipe and lamellae are usually dotted with minute, resinous, granular particles.

Upon vegetable debris upon ground. Common.

The pure white color of the pileus is frequently obscured by the substratum within or upon which the plant grows, which sometimes gives it a grayish or brownish appearance.

25 *Marasmius salignus* Peck

Ann. Rep't N. Y. State Mus., 35:135. 1884.

Pileus submembranous, convex or plane, sometimes subumbilicate, 4-10 mm broad; surface dry, glabrous or subpruinose, white, margin even; lamellae often joined at the base, rarely forking, adnate, subdistant, narrow, white; spores ovoid or subellipsoid, 6-7 by 4 μ ; stipe slender, stuffed, reddish brown, slightly furfuraceous or pruinose, 1.5-2.5 cm long, 1 mm thick.

Upon the bark of trees. Not common. This species seems to be very closely related to *M. candidus* (Bolt.) Fr. Some of Peck's collections might well pass for the plant figured by Bolton (Hist. Fung. pl. 39, fig. D.)

26 *Marasmius nigripes* (Schw.) Fries

Epicr. Myc. 383. 1838.

Pileus membranous, 6-12 mm broad, campanulate, umbonate; surface white, pruinose, pellucid, margin striate; lamellae adnate, broad, white or pallid, becoming dark in dried plants; spores angular, 8-9 μ ; stipe insititious, slightly tapering downward, horny, blackish, white-pruinose, becoming brown in dried plants, 3.5-4 cm long, 1-2 mm thick.

Upon leaves, twigs etc., in woods. Rare in New York but common in Ohio and Michigan. *Marasmius nigripes* is readily distinguished from all other species of *Marasmius* by its irregularly angular spores.

27 *Marasmius papillatus* Peck

Ann. Rep't N. Y. State Mus., 24:76. 1872.

Pileus submembranous, convex to expanded, papillate, gregarious, 1–2 cm broad; surface obscurely striate, sordid white or gray, sometimes with a pink tint; margin fluted in dry plants; lamellae adnate with slightly decurrent tooth, some decidedly decurrent, crowded, narrow, white or yellowish; spores 8–9 by 3.5 μ ; stipe slender, deeply radicating, firm, hollow, concolorous, white-pruinose, 2.5–5 cm long, 1–2 mm thick.

Upon mossy logs in woods. Common in the Adirondack mountains.

28 *Marasmius perforans* (Hoffm.) Fries

Epicr. Myc. 385. 1838.

Pileus submembranous, plane, not umbilicate, 8–12 mm broad; surface rugulose, glabrous, pallid white, margin not striate; context with a stinking odor, not of onions; lamellae adnate, many dimidiate, simple, crowded, whitish; spores 6–8 by 2–4 μ ; stipe equal, hollow, brownish black, velvety, 2–3 cm long.

Upon dead leaves of fir; occasionally upon leaves of other kinds. Common.

This plant has been distributed as *Marasmius abietis* (Batsch.) Fr. The plant which Batsch figures and describes as *M. agaricus abietus* seems to be another species, possibly *M. alliatus* (Schaeff.) Schröt.

29 *Marasmius squamula* (Batsch.) Pennington

North American Flora, v.9, pt 4, p. 277. 1915.

Epicr. Myc. 386. 1838 (As *Marasmius epiphyllus* Fr.).

Ann. Rep't N. Y. State Cab., 23:175. 1872 (As *Marasmius sub-venosus* Peck).

Pileus membranous, plane, at length subumbilicate, 2–10 mm broad; surface plicate, rugose, milk-white, often becoming light brown in age, margin not striate; lamellae adnate, few, rather narrow, often veinlike, distant, venose-connected, white; spores

8-9 by 3 μ ; cystidia awl-shaped, 25-30 by 5 μ ; stipe equal, inserted, horny, fistulose, brown below, light above, pruinose or very slightly velvety, 2-5 cm long, 5-1 mm thick.

Upon dead herbaceous stems, leaves, twigs etc. Common.

30 *Marasmius caricicola* Kauff.

North American Flora, v.9, pt 4, p. 277. 1915.

Mich. Geol. Sur. Bul. 1915.

Pileus membranous, somewhat tough, pliant, convex-expanded, obtuse, gregarious, 4-8 mm broad; surface broadly sulcate or alveolate, pruinose, pure white; lamellae thick, adnate, very distant, rather broad, pure white; spores 15-18 by 6-6.5 μ ; basidia 2-spored or 4-spored; stipe very short, terete, equal, subglabrous, pure white, inserted by a naked base, 2 mm long, .7 mm thick.

Upon stems of sedges in marshes. Not yet reported from New York. It is not unlikely that it may yet be found within the State. It is easily overlooked because of its small size.

31 *Marasmius praeacutus* Ellis

Torrey Club Bul. 6, p.76. 1876.

Pileus membranous, convex to expanded, subumbilicate, 6-10 mm broad; surface pulverulent, white, the disk red-tinged; margin at first incurved, subsulcate, striate; lamellae adnate, more or less forked, hardly crowded, narrow, white; spores 5-6 by 3 μ ; stipe swollen below but contracted to a point at the base, hollow, reddish brown, white at the base, pulverulent, 2.5 cm long, 1 mm thick. In young plants, the swollen part of the stipe constitutes nearly the entire plant.

Upon dead leaves, twigs, and bark in woods. Rare.

The peculiar appearance of the young plants and the marked constriction of the stipe at its base easily distinguish this species.

32 *Marasmius opacus* Berk. & Curt.

Jour. Bot. & Kew Misc., 1:99. 1849.

Pileus submembranous, convex, often slightly depressed around a central umbo, 5-8 mm broad; surface rugulose, scarcely striate, opaque, pulverulent, white; lamellae adnexed, distant, ventricose; spores 6-7 by 3 μ ; stipe institious, elongate, pulverulent, subfuraceous, pallid, 2.5-4 cm long, 1 mm thick.

Fallen leaves and branches. Not yet reported from New York. It is not unlikely that it will be found in the southern part of the State, since it occurs in Ohio.

33 *Marasmius ramulinus* Peck

Ann. Rep't N. Y. State Mus., 51:286. 1898.

Pileus very thin, submembranous, broadly convex, subumbilicate, 4-8 mm broad; surface white, margin nearly even to irregularly plicate-striate; lamellae adnate, rather close, white; spores 7-8 by 3.5-4 μ ; stipe slender, inserted, whitish, becoming tawny-red, stuffed, minutely downy or pruinose, 12-18 mm long.

Upon dead twigs and herbaceous stems. Rare.

34 *Marasmius phyllophilus* Peck

N. Y. State Mus. Bul. 116, p.26. 1907.

Pileus membranous, convex or nearly plane, gregarious, 8-16 mm broad; surface dry, strongly rugose-striate or rugose-sulcate, whitish with a faint pinkish tint when dry; lamellae adnexed, distant, narrow, rounded behind, whitish, the interspaces venose; spores 5-6 by 3-4 μ ; stipe inserted, slender, equal, tough, hollow, white, covered with whitish downy or velvety pubescence, 20-30 mm long, 1 mm thick.

Upon dead leaves. Rare.

35 *Marasmius insititius* Fries

Epicr. Myc. 386. 1838.

Pileus membranous, convex to plane or subumbilicate, 6-12 mm broad; surface not polished, pale yellowish brown, then whitish, margin becoming plicate-sulcate; lamellae unequal, simple, broadly adnate, distant, narrow in front, pallid; spores 4 by 2 μ ; stipe inserted, horny, hollow, reddish brown, floccose-furfuraceous, 2-3 cm long, 1 mm thick.

Upon dead leaves and twigs. Not uncommon.

36 *Marasmius tomentosipes* Peck

Torrey Club Bul. 29, p.71. 1902.

Pileus thin, convex, becoming nearly plane, generally umbilicate, gregarious or subcespitose, 1-3.5 cm broad; surface glabrous, widely striate on the margin when moist, golden yellow, brownish

yellow, or ferruginous, often becoming brown with age; lamellae adnate or decurrent, subdistant, thin, arcuate, pale yellow; spores 6-7 by 3-4 μ ; stipe tough, elastic, hollow, blackish brown, covered with tawny tomentum which forms minute, meallike patches at the apex and a more or less dense mat at the base, 2-6 cm long, 1-1.5 mm thick.

Upon vegetable mold, often among grass and moss. Not uncommon.

This species has a wide distribution in America as well as in Europe. It seems to have been known in America as *M. velutipes* (Clements, Crypt Form. Colo. 182) and as *M. flammans* Cooke (not Berk. 1856) (Rav. Fungi Am. 467). In Europe it seems to be known as *M. caudicinalis* (Sw.) Fr. or *M. caulicinalis*. (Not *M. Agaricus caudicinalis* Bull.) Specimens from Romell in Sweden under the name *M. caudicinalis fulvo-bulbilosus* seem to be identical with our New York form. Fries says of *M. caudicinalis* (Epicr. Myc. 1838) that it is very similar to *Omphalia campanella*. Peck (N. Y. State Mus. Bul. 67) says, "Similar in color to *Omphalia campanella*, but differing in its more scattered mode of growth, its longer stem sprinkled with tawny mealy particles, and in its less distinctly umbilicate pileus."

37 *Marasmius alienus* Peck

N. Y. State Mus. Bul. 139, p.25. 1910.

Pileus thin, tough, convex, 6-10 mm broad; surface dry, subpruinose, pallid or pale buff; margin thin, straight, striate in dry plants; lamellae subarcuate, slightly decurrent, distant, creamy yellow, becoming brownish; spores 8-10 by 4-5 μ , oblong or narrowly ellipsoid; stipe firm, slender, hollow, pallid, subpruinose, 2.5-5 cm long, .5-1 mm thick.

Upon mossy, prostrate tree trunks. Rare.

38 *Marasmius leptopus* Peck

N. Y. State Mus. Bul. 67, p.25. 1903.

Pileus thin, broadly convex or nearly plane, 6-10 mm broad; surface glabrous, reddish brown; margin obscurely or rugosely striate; lamellae adnate, close, thin, narrow, white; spores oblong or narrowly ellipsoid, 7.5-9 by 3-4 μ ; stipe slender, inserted, hollow, whitish or pallid, glabrous, 2.5-4 cm long, 1 mm thick.

Upon dead leaves. Not uncommon.

39 *Marasmius olneyi* Berk. & Curt.

Ann. Mag. Nat. Hist. III 4:295. 1859.

Pileus membranous, convex, then plane or depressed, 8-10 mm broad; surface glabrous, dull-rufescent, margin striate at first, then radiately rugose; lamellae joined to a collar which may become free, subdistant, white, the edges slightly crenulate; spores 9-11 by 4-5 μ ; stipe pulverulent-tomentose, white, 3.5-4 cm long.

Upon dead twigs. Not reported from New York. It is not unlikely that this species will be found within the State, since it has been reported from both Rhode Island and Michigan.

40 *Marasmius ramealis* (Bull.) Fries

Epicr. Myc. 381. 1838.

Pileus subfleshy, plane or depressed, obtuse, 4-9 mm broad; surface rugulose, opaque, white, disk with a reddish tint, margin not striate; lamellae adnate, connected behind, subdistant, narrow, white; spores ovoid, apiculate, 8-10 by 3-3.5 μ ; stipe short, stuffed, white, reddish below, farinaceous, 12-18 mm long, 1 mm thick.

Upon dead twigs and branches in woods. Not common.

41 *Marasmius concinnus* Ellis & Ev.

Proc. Acad. Nat. Sci. 1893.

Pileus minute, convex, cespitose, 1 mm broad; surface pruinose, smoke-brown; lamellae adnate, subdistant, pruinose, the edges obtuse; spores globose, hyaline, 3 μ ; stipe attenuate above, white, hairy strigose below, pruinose-pubescent at the apex, 2 mm long.

Upon dead *Euonymus* twigs. Known only from New Jersey.

Further observations are needed to determine whether this is a good species or merely a small form of *M. ramealis* (Bull.) Fr. or other related species.

42 *Marasmius cucullatus* Ellis

Torrey Club Bul. 6, p.76. 1876.

Pileus thin, campanulate, 1-2 mm broad; surface sulcate-striate, closing around the stipe when dry, pale straw color; lamellae adnate, about 12, of unequal length, paler than the pileus; spores not found; stipe slender, pale straw color, with thin white tomentum at the base, 5-10 mm long.

Upon dead twigs of *Vaccinium corymbosum*. Reported from New Jersey only.

Further observations and studies are necessary to determine whether this is a distinct species or only an immature form of some other species.

43 *Marasmius minutissimus* Peck

Ann. Rep't N. Y. State Mus., 27:97. 1878.

Pileus minute, convex or expanded, .5-1 mm broad; surface white, pubescent, with minute, simple or glandular hairs 30 μ long; lamellae few, narrow, often veinlike or almost wanting; spores not found in the type specimens; stipe capillary, minutely pubescent like the pileus, blackish brown below, pellucid white above.

Upon dead leaves. Rare, probably often overlooked on account of its extremely small size. The minute size and gland-tipped hairs characterize this species. After examining the type specimens of *M. minutissimus* and reading the description of *Eomyccenella echinocephala* Atk. (Bot. Gaz., 34: 37. 1902) one can not help thinking that the two plants are the same species.

44 *Marasmius filipes* Peck

Ann. Rep't N. Y. State Mus., 24:77. 1872.

Pileus membranous, delicate, convex, subumbilicate, 2 mm broad; surface white, distantly and obscurely striate; lamellae about 6-8, adnexed to a collar, few, distant, white; spores 7-8 by 3 μ ; stipe elongate, filiform, flexed, whitish, glabrous, brownish at the base, 2.5-4 cm long.

Upon dead fir needles. Not common.

45 *Marasmius minutus* Peck

Ann. Rep't N. Y. State Mus., 27:97. 1875.

Pileus membranous, convex, 2-4 mm broad; surface glabrous, reddish brown, sometimes almost vinous red, margin striate-sulcate; lamellae unequal, distant, subvenous, sometimes branched, white; spores 8 by 3.5-4 μ ; stipe capillary, blackish brown, glabrous, shining, 2.5 cm long.

Upon dead leaves, especially those of black ash. Not common.

46 *Marasmius pirinus* Ellis

Torrey Club Bul. 8, p.64. 1881.

Pileus membranous, hemispheric, slightly umbilicate, minute, 1-1.5 cm broad; surface sulcate-striate, atomat or spiny under a lens with ovoid, pointed cells, at first pallid, becoming chestnut; lamellae few, distant, white; spores obovoid, 7-8 by 2.5-3 μ ; cystidia oblong-fusoid, narrowed to a point above, 12-13 μ long; stipe filiform, pallid above, often striate, 6-7 mm long.

Upon dead leaves of pear trees. Rare.

47 *Marasmius thujinus* Peck

N. Y. State Mus. Bul. 67, p.26. 1903.

Pileus membranous, hemispheric or convex, often subumbilicate, 2-3 mm broad; surface subglabrous, minutely pulverulent-tomentose under a lens, cinereous, tinged with lilac, margin distantly striate; lamellae adnate, few, distant, white; spores ellipsoid, pointed 7-8 by 3-4 μ ; stipe capillary, inserted, pallid, dry, pellucid, glabrous, at times slightly brownish or minutely floccose at the base, 12-24 mm long, scarcely thicker than a hair.

Upon dead leaves of *Thuja occidentalis*. Rare.

48 *Marasmius alliatus* (Schaeff.) Schröt.

Epicr. Myc. 379. 1838 (As *Marasmius scorodonius* Fries).

Pileus soft, fleshy, soon expanded, 1-2 cm broad; surface at first even and rufous, soon becoming smooth, rugulose, crisped and white; context having a strong odor of onions; lamellae adnate, crisped, white; spores 6-8 by 3-4 μ ; stipe firm, horny, hollow, equal or enlarged above, red or reddish brown, glabrous, shining, 2-4 cm long, 1-2 mm thick.

Upon decaying vegetable debris in woods. Common. "Odor of skunk cabbage." Peck. Although the American plant is considered to be the same as the European, there is a constant difference in the character of the stipe. In our form the stipe is much firmer and more rigid than in the European form.

49 *Marasmius calopus* (Pers.) Fries

Epicr. Myc. 379. 1838.

Pileus soft, fleshy, convex to plane or depressed, 8-18 mm broad; surface smooth, becoming rugulose, light yellow or white; lamellae

emarginate-adnexed, thin, white; spores 7 by 4 μ ; stipe equal, reddish brown, glabrous, not mycelioid, shining.

Upon dead leaves and grass. Not common. This species seems to differ from *M. alliatus* (Schaeff.) Schröt. chiefly in the absence of the odor of onions, which is not noticeable in one and very marked in the other.

50 *Marasmius delectans* Morgan

Jour. Myc. 11:206. 1905.

Pileus subcoriaceous, convex, then expanded and depressed, 1-2 cm broad; surface glabrous, rugulose, white, changing in drying to yellow or pale alutaceous; lamellae emarginate-adnexed, subdistant, slightly venose-connected, moderately broad, unequal, white; spores lance-oblong, 7-9 by 4 μ ; stipe long, slender, slightly tapering upward, arising from abundant white mycelium, glabrous, shining brown, white at the apex, 3-5 cm long, 1-1.5 mm thick.

Upon dead leaves of deciduous trees. Not common. Reported as *M. calopus* (Pers.) Fr.

51 *Marasmius glabellus* Peck

Ann. Rep't N. Y. State Mus., 26:66. 1874.

Pileus membranous, convex to expended, 6-15 mm broad; surface dark ochraceous, often roughened on the disk, pruinose with cystidia, margin distantly striate; lamellae free, unequal, interveined, distant, broad, ventricose, whitish; spores 9 by 4.5 μ ; cystidia pointed, 30-40 μ long; stipe horny, hollow, reddish brown or chestnut, glabrous, shining, white at the apex, equal or thickened and mycelioid at the base, 2.5-5 cm long, 1 mm thick.

Upon dead leaves in woods. Not uncommon.

52 *Marasmius bellipes* Morgan

Jour. Myc. 11:207. 1905.

Pileus thin, subfleshy, campanulate, then expanded, 1.5-2.5 cm broad; surface glabrous, pale pinkish to purplish, margin plicate-sulcate; lamellae approximate, subdistant, moderately broad, equal, white; spores lanceolate, 10-12 by 3-4 μ ; stipe long, slender, thicker upward, brown and shining below, purplish at the apex, glabrous, arising from abundant mycelium, 4-6 cm long, 1 mm thick.

Upon dead leaves of deciduous trees. Not uncommon. Reported by Peck as *M. glabellus* Peck, although the lamellae are narrower not ventricose and cystidia are lacking.

53 *Marasmius rotula* (Scop.) Fries

Epicr. Myc. 385. 1838.

Pileus membranous, convex, umbilicate, gregarious or subcespitose, 3-10 mm broad; surface plicate, not polished, whitish, often light brown in dried plants, disk sometimes darker; lamellae few, broad, distant, joined together behind into a free collar, whitish; spores 6-8 by 3-4 μ ; stipe fistulose, horny, smooth, shining, blackish brown, inserted or arising from rhizomorphic strands, 2-5 cm long.

Upon dead leaves, wood and bark in woods. Very common.

54 *Marasmius capillaris* Morgan

Jour. Cinc. Soc. Nat. Hist., 6:194. 1883.

Pileus membranous, convex, umbilicate, 2-5 mm broad; surface plicate-sulcate, very minutely wrinkled, alutaceous to umber, white at the center; lamellae equal, broad, white, attached to a free collar; spores 8-10 by 4-5 μ ; stipe capillary, very long, inserted, black, paler at the apex, glabrous, shining, 5-6 cm long.

Upon old leaves and sticks in woods. Not common. This species seems to differ from *M. rotula* Fr. in its constantly smaller size and brownish pileus with white center.

55 *Marasmius graminum* (Lib.) Berk. & Br.

Berk. Outl. Brit. Fungol. 222. 1860.

Pileus membranous, convex to plane, umbonate, 3-6 mm broad; surface reddish white, becoming darker in dried plants, margin sparingly sulcate; lamellae free with collar, equal, distant, whitish; spores 8-9 by 4-5 μ ; stipe capillary, tough, black or pallid at the apex, glabrous, shining.

Upon dead grass. Not uncommon.

It is doubtful if this species is distinct from *M. Curreyi* Berk. & Br. The only difference in the descriptions of the two species is in the size of the spores, which are given as subglobose 3-4 μ for *M. graminum* and 9 by 5-6 μ for *M. Curreyi*. It is very possible that the spore measurements of *M. graminum* are based upon immature plants.

56 *Marasmius albiceps* Peck

Ann. Rep't N. Y. State Mus., 43:67. 1890.

Pileus membranous, convex or campanulate, 5 mm broad; surface glabrous, white; lamellae adnate or arcuate-decurrent, distant, broad, white; spores obovoid, 6-7 by 3-4 μ ; stipe horny, setiform, black, paler at the apex, glabrous, growing from a brown mycelium, 16-36 mm long.

Upon dead branches in woods. Rare. In older plants the lamellae are strongly decurrent as in *Omphalia fibula* Fr.

57 *Marasmius straminipes* Peck

Ann. Rep't N. Y. State Mus., 26:66. 1874.

Pileus membranous, hemispheric or convex, 2.5-8 mm broad; surface glabrous, white, margin striate; lamellae adnexed, distant, unequal, white, yellow in drying; spores 7 by 3.5 μ ; stipe horny, filiform, pale straw color, pallid when dry, brownish at the base, glabrous, shining, 2.5-5 cm long.

Upon dead needles of *Pinus rigida*. Rare.

58 *Marasmius siccus* (Schw.) Fries

Epicr. Myc. 382. 1838.

Ann. Rep't N. Y. State Cab., 23:126. 1872 (As *Marasmius campanulatus* Peck).

Bot. Sur. Nebr., 4:20. 1896 (As *Marasmius fulviceps* Clements).

Syll. Fung., 14:101. 1899 (As *Marasmius clementsianus* Sacc. & Sydow.).

Pileus membranous, convex or campanulate, solitary or gregarious, 6-15 mm broad; surface dry, glabrous, ochraceous, sometimes pink, rarely gray in dry plants; margin radiate-sulcate; lamellae subfree, narrowed behind, few, distant, broad, white; spores 12-15 by 6-7 μ , sometimes 20 μ long; stipe slender, not capillary, tough, hollow, blackish brown, glabrous, shining, 2.5-5 cm long, 1-2 mm thick.

Upon dead leaves in woods. Very common.

There is some variation in the size and color in different collections of this species. There is, however, less difference between the type specimens of *M. campanulatus* Pk., *M. siccus* (Schw.) and *M. clementsianus* Sacc. and Sydow (*M. fulviceps* Clements) than there is between different collections of *M. campanulatus* made by Peck and deposited by him in the New York State Museum. Like many other species of *Marasmius*, the spores vary in length. It is claimed that mature spores

of this species may elongate considerably as if beginning to germinate before they are shed.

59 *Marasmius pulcheripes* Peck

Ann. Rep't N. Y. State Mus., 24:77. 1872.

Pileus membranous, campanulate, obtuse, 4-8 mm broad; surface distantly striate, dry, glabrous, soft maroon or vinous-red; lamellae free, few, distant, ascending, narrow; spores 12-14 by 4 μ ; stipe strict, brownish black, clear red at the apex, glabrous, shining, 2.5-4 cm long, .5 mm thick.

Upon dead leaves and sticks in woods. Not uncommon. This species might be considered as one of the many forms of *M. siccus* (Schw.) Fr. Its red or purple color and small size are usually sufficient, however, to distinguish it from forms of *M. siccus*.

60 *Marasmius androsaceus* (L) Fries

Epicr. Myc. 385. 1838.

Pileus membranous, convex, subumbilicate, 3-12 mm broad; surface glabrous, fuscous or often with a pinkish tint, sometimes nearly white, margin striate; lamellae simple, distinct, subdistant, adnate, whitish; spores ovoid-ellipsoid or oblong, 6-9 by 3 μ ; stipe horny, contorted and sulcate when dry, hollow, black, glabrous, 2-5 cm long, .5 mm thick.

Upon dead leaves in woods usually under conifers, especially pine. Very common.

Peck (Ann. Rep't N. Y. State Mus., 41:85, 1888) says that the pale form grows upon fallen needles of spruce trees and the one with fuscous pileus upon fallen pine needles.

61 *Marasmius melanopus* Morgan

Jour. Cinc. Soc. Nat. Hist., 18:36. 1895.

Pileus membranous, convex, 4-6 mm broad; surface glabrous, purplish gray, margin not striate; lamellae adnate, subdistant, rather broad, purplish gray; spores obovoid, apiculate, 5-6 by 2.5 μ ; stipe slender, hollow, black, shining, smooth, 2-4 cm long.

Upon dead leaves of deciduous trees. Not uncommon.

Closely related to *M. androsaceus* (Bull.) Fr. from which it may be distinguished by its colored lamellae and pileus without striation. *M. melanopus* seems to be confined to leaves of deciduous trees while *M. androsaceus* is usually found upon needles of conifers.

THE FUNGI OF NORTH ELBA

BY C. H. KAUFFMAN

For the purpose of obtaining, for the Cryptogamic herbarium of the University of Michigan, a representative collection of the fungi of the Adirondacks, a trip was planned to the collecting grounds of Doctor Peck at North Elba. The writer was accompanied by Mr E. B. Mains as assistant, and the collecting was done between August 31 and September 21, 1914. We located at the south end of the town of Newman. During the three weeks of our stay the weather was extremely propitious for the growth of fungi. For several weeks before our arrival and during most of the time thereafter, it rained heavily and almost continually. As a result the fungi, especially the Agarics, were to be found in such abundance that we are able to add a large number of records to the already large list of Doctor Peck.¹ The region covered has in a general way a radius of 3 or 4 miles from Newman. This, it should be noted, is a very small part of the territory studied by Doctor Peck.

The most striking characteristic of this region is the abundance of species of Cortinariii. These are, however, largely limited to the subgenera *Telamonia*, *Dermocybe*, and *Hydrocybe*. This is in sharp contrast to the flora of a region of hardwoods like that of southern Michigan, for in the latter area the subgenera *Phlegmacium* and *Myxadium* predominate. It may also be worth while to point out that the forests and forest floor and the subalpine conditions of this region are very similar to those about Stockholm and Upsala, Sweden. The species of fungi should then also be very similar in both places. With this in mind, it was not surprising to find a large number, especially of the genus *Cortinarius*, which the writer had collected in that country.

Mr Mains gave special attention to the Uredinales and Ascomycetes, and those groups have been identified largely by him. We here kindly thank Professor Arthur and Mr C. G. Lloyd for courtesies extended in the examination of some of the rusts and Hymenomycetes.

MYXOMYCETES

EXOSPOREAE

Ceratiomyxa fruticulosa (Muell.) Macbr. On moist decayed wood. Common.

¹ Plants of North Elba. Charles H. Peck. N. Y. State Mus. Bul. 28, June 1899.

MYXOGASTRES

PHYSARACEAE

- Fuligo violacea Pers.* On bark of decayed pine wood.
Fuligo ovata (Schaeff.) Macbr. On decayed wood etc.
Physarum contextum Pers. On sticks.
Physarum nephroideum Rost. On decayed wood.
Physarum sinuosum (Bull.) Weinm. On fallen twigs.
Craterium leucocephalum (Pers.) Ditt. On fallen leaves and twigs.
Leocarpus fragilis (Dick.) Rost. On moss and decayed debris.

DIDYMIACEAE

- Didymium eximium Pk.* On fallen, decaying leaves.
Didymium melanospermum (Pers.) Macbr. On rotten log.
Didymium nigripes (Lk.) Fr. On spruce twig.
Diderma crustaceum Pk. On fallen and living leaves.
Diderma testaceum (Schrad.) Pers. On stem of living plant and dead leaves.
Lepidoderma tigrinum (Schrad.) Rost. On rotten log.

STEMONITACEAE

- Stemonitis fusca (Roth.) Rost.* On moss and decayed log.
Comatricha irregularis Rex. On rotting bark.
Diachaea leucopoda (Bull.) Rost. On moss and sticks.

RETICULARIACEAE

- Enteridium splendens Morg.* On decayed log.

TUBIFERACEAE

- Tubifera ferruginosa (Batsch.) Macbr.* On variety of substrata of wood.

CRIBRARIACEAE

- Dictydium cancellatum (Batsch.) Macbr.* On decayed log.

LYCOGALACEAE

- Lycogala epidendrum (Buxb.) Fr.* On decayed wood.

ARCYRIACEAE

- Arcyria cinerea (Bull.) Pers.* On decayed wood.
Arcyria denudata (L.) Scheld. On decayed wood.
Arcyria nutans (Bull.) Grev. On decayed wood.

TRICHIACEAE

Trichia botrytis Pers. On decayed wood.

Trichia varia (Pers.) Rost. Among moss on wood.

ASCOMYCETES

EXOASCACEAE

Exoascus alnitorguus (Tul.) Sadebeck. On aments of *Alnus incana*.

GEOGLOSSACEAE

Mitrula irregularis (Pk.) Durand. In moist ground under conifers. Very distinct.

Microglossum rufum (Schw.) Underwood. On moist, mossy conifer woods.

Trichoglossum hirsutum (Pers.) Boud. Among moss in conifer woods.

Geoglossum glabrum Pers. In swamps of conifers.

Spathularia clavata Sacc. On mossy ground under conifers. *S. rugosa Pk.* is considered identical.

Spathularia velutipes Cke. et Farl. On mossy ground under conifers.

Leotia lubrica Pers. On wet moss under conifers.

Leotia stipitata (Bosc.) Schroet. On mossy ground under conifers.

Cudonia circinans Fr. In wet, mossy places under conifers.

Cudonia lutea (Pk.) Sacc. In spruce and balsam etc. woods, among fallen leaves.

HELVELLACEAE

Helvella crispa Fr. On the ground, in mixed woods of spruce, balsam and birch.

Helvella elastica Pk. On the ground and decayed wood in mixed woods.

Helvella infula Schaeff. On rotten wood and on the ground, in mixed woods.

PEZIZACEAE

Lachnea coprinaria (Cke.) Sacc. On cow dung. Placed here because of its reddish disk and the spore size, in which it differs from *L. stercorea Fr.*

Lachnea hemispherica (Wigg.) Gill. On decayed wood.

Lachnea scutellata Gill. On decaying wood.

Plicaria badia Fuck'l. On soil and decayed logs.

- Plicaria repanda* (Wahl.) Rehm. On rotten wood.
Humaria fusispora (Berk.) Rehm. On the ground.
Geopyxis cupularis (L.) Sacc. Among moss on rotten wood.
Macropodia macropus Fuck'l. On sandy ground in mixed woods.
Aleuria rutilans (Fr.) Gill. On mosses in balsam and tamarack swamp. This species has reticulated spores and hence, as pointed out by Seaver (Iowa Discomycetes), belongs to *Aleuria* and not to *Humaria* where it is placed by Rehm. The apothecia were about .5 cm in diameter, except a single one which measured 2 cm across. The spores measure 19-26 by 11-14 microns.
Otidea leporina (Batsch.) Fuck'l. On the ground under spruce and balsam.

ASCOBOLACEAE

- Lasiobolus equinus* (Müll.) Karst. On dung edge of clearing.
Ascophanus lacteus Phill. On cow dung.

HELOTIACEAE

- Chlorosplenium aeruginascens* (Nyl.) Karst. On decorticated wood.
Chlorosplenium aeruginosum (Oed.) De Not. On dead wood.
Dasychypha agassizii (B. & C.) Sacc. On the bark of balsam branches.
Dasychypha wilkommii Hart. On tamarack twigs.
Helotium citrinum (Hed.) Fr. On dead wood.
Helotium epiphyllum (Pers.) Fr. On fallen leaves of poplar.

MOLLISACEAE

- Mollisia cinerea* (Batsch.) Karst. On decayed wood.
Fabraea ranunculi (Fr.) Karst. On *Ranunculus acris*. All the spores appeared continuous in this material, hence it could be easily referred to the genus *Pseudopeziza*.

CENANGIACEAE

- Dermatea acericola* (Pk.) Rehm. On bark of dead maple branches.
Tympanis alnea (Pers.) Fr. On branches of *Alnus incana*.
Tympanis pinastri Tul. On bark of balsam trees. This is probably *T. laricina*, reported by Peck.

PHIACIDIACEAE

- Coccomyces coronatus* (Schum.) De Not. On fallen beech leaves.

HYPODERMATACEAE

Lophodermium pinastri (*Schrad.*) *Chev.* On fallen needles of white pine.

HYSTERIACEAE

Glonium lineare (*Fr.*) *De Not.* On birch bark.

Hysterographium mori (*Schw.*) *Rehm.* On decorticated logs.

ERYSIPHACEAE

Microsphaera alni (*D. C.*) *Wint.* On leaves of *Viburnum*.

Uncinula circinata *Cke. & Pk.* On leaves of maple.

Phyllactinia corylea (*Pers.*) *Karst.* On leaves of alder.

HYPOCREACEAE

Hypomyces aurantius (*Pers.*) *Tul.* On *Polystictus versicolor*.

Peckiiella lateritia (*Fr.*) *Maire.* On species of *Russula*. Reported by Peck as *Hypomyces*.

Nectria cinnabarina (*Tul.*) *Fr.* On dead sticks and branches.

Nectria episphaeria (*Tode*) *Fr.* On *Ustulina vulgaris*. Under the high powers of the microscope the spores of this species are finely warty. This fact seems to have been neglected by authors.

Byssonectria violacea (*Schmidt.*) *Seaver.* On *Fuligo ovata*. The pale violet perithecia are closely aggregate over the whole surface of the aethalium.

SORDARIACEAE

Podospora ampicornis *Ell.* (sense of Griffiths). On rabbit dung.

SPHAERIACEAE

Lasiosphaeria hispida (*Tode*) *Fuck'l.* On bark of white pine.

Melanomma pulvis-pyrius (*Pers.*) *Fuck'l.* On fallen branches of some deciduous tree.

PLEOSPORACEAE

Leptosphaeria crepini (*Westd.*) *De Not.* On strobili of *Lycopodium obscurum* var. *dendroideum*.

DIATRYPACEAE

Diatrype albopruinosa (*Schw.*) *Cke.* On dead maple twigs.

Diatrype platystoma (*Schw.*) *Ell.* On dead maple branches.

Diatrype stigma (*Hoff.*) *De Not.* On dead beech limbs.

Diatrypella betulina *Pk.* On fallen branches of yellow birch.

Diatrypella discoidea *Cke. et Pk.* var. *alni* *Cke.* On dead branches of alder.

VALSACEAE

Valsa brevis *Pk.* On bark of fallen balsam branches.

Valsa ceratophora *Tul.* On dead branches of *Alnus incana*.

MELOGRAMMATACEAE

Valsaria instituta *Ces. et De Not.* On bark of maple.

XYLARIACEAE

Ustulina vulgaris *Tul.* On much decayed logs.

Hypoxyton coccineum *Bull.* On bark of beech.

Hypoxyton effusum *Nke.* On rotten logs.

Hypoxyton fuscum (*Pers.*) *Fr.* On branches of *Alnus incana*.

Hypoxyton multiforme *Fr.* On bark and branches of yellow birch.

Hypoxyton rubiginosum (*Pers.*) *Fr.* On decaying logs.

Xylaria corniformis *Fr.* On rotten logs.

Xylaria digitata *Grev.* On pine logs. Also var. *americana* *Pk.*

FUNGI IMPERFECTI

Phyllosticta saccharina *Ell. et Mont.* On leaves of *Acer pennsylvanicum*.

Cytospora horrida (*Sacc.*) On dead branches of birch.

Sphaeronemella helvellae *Karst.* On stipe of *Helvella infula*.

Discosia artocreas (*Tode*) *Fr.* On leaves of poplar.

Stysanus berkeleyi (*Mont.*) *Sacc.* On pore surface of *Fomes pinicola*.

Polythrincium trifolli *Kze.* On leaves of *Trifolium repens*.

Cercospora circumscissa *Sacc.* On leaves of *Prunus*.

Pestalozzia funerea *Desm.* On dead leaves of living arbor vitae tree.

UREDINALES

MELAMPSORACEAE

Chrysomyxa chiogenis *Diet.* On *Chiogenes hispidula*. Only the uredospore stage was found.

Chrysomyxa ledi (*Alb. et Schw.*) *De Bary.* On *Ledum groenlandicum*. Uredospore stage.

Coleosporium solidaginis (Schw.) Thüm. On aster. Uredospore stage.

Melampsora biglowii Thüm. On leaves of willow. Uredospore stage.

Melampsora medusae Thüm. On leaves of *Populus tremuloides*. Uredospore and Telentospore stage.

Melampsorium betulae (Schw.) Arth. On leaves of *Ostrya*. Uredospore stage.

Pucciniastrum pustulatum (Pers.) Diet. On leaves of *Epilobium angustifolium*. Telentospore stage.

Uredinopsis osmundae Magn. On *Osmunda cinnamomea*. Uredospore stage.

Melampsorella caryophyllacearum Schroet. Aecidial stage. (*Peridermium elatinum* K. & S.) abundant on the needles of "witches brooms" which it causes on the balsam fir.

PUCCINIACEAE

Puccinia angustata Pk. On *Scirpus cyperinus* var. *pelius*. Telentospore stage. On the leaves and leaf-sheaths. *Fide* Arthur.

Puccinia asteris Duby. On leaves of asters. Telentospore stage.

Puccinia circaeae Pers. On *Circaea alpina*. Telentospore stage. On the leaves.

Puccinia perminuta Arth. On *Cinna arundinacea*. Telentospore stage. *Fide* Arthur.

Puccinia spreata Pk. On *Mitella nuda*. Telentospore stage.

Puccinia uniporula Orton. On *Carex arctata* and *debilis* var. *rudgei*. Telentaspore stage. *Fide* Arthur.

Puccinia urticae (Schw.) Lagerh. On *Carex crinita*. Telentospore stage. *Fide* Arthur.

Puccinia violae D.C. On leaves of violet. Telentospore stage.

Phragmidium albidum Lagerh. On leaves of *Rubus*. Uredospore stage.

TREMELLALES

Hirneola auricula-judae Berk. On decaying wood of spruce and balsam.

Pilacre Petersii B. & C. On decorticated wood of a prostrate pine tree.

Tremellodon gelatinosum Fr. On wet and rotten wood.

Exidia glandulosa Fr. On dead branches and sticks of beech, *Alnus* and other deciduous trees.

Tremella sp. Parasitic on *Aleurodiscus amorphus*. Except in color, which is whitish, it seems close to *T. versicolor* Pk.

Tremella mycetophila Pk. Parasitic on *Collybia dryophila*.

Naematelia encephala Fr. On decayed wood.

Dacryomyces deliquescens Fr. On decayed wood.

Dacryomyces corticoides E. & E. On sticks.

Calocera viscosa Fr. On the ground under conifers.

THELEPHORACEAE

Thelephora anthocephala Fr. On the ground among conifer needles.

Thelephora laciniata Fr. Growing interwoven with debris of sticks, conifer needles and humus.

Thelephora palmata Fr. On the ground, under balsam and spruce. Known by its strong fetid odor.

Thelephora terrestris Fr. Forming large, expanded masses on moss and humus.

Stereum sanguinolentum Fr. Resupinate, on spruce logs, bleeding where bruised if fresh, the wounds turning blackish. The resupinate habit, its host, and its texture separate it from *S. spadiceum*.

Stereum tuberculosum Fr. On spruce and hemlock logs and stumps.

Stereum curtisii Berk. On dead maple branches.

Hymenochaete avellana Fr. On dead branches of maple and other deciduous trees.

Hymenochaete cinnamomea Fr. On birch bark.

Hymenochaete ferruginosa Fr. On log of deciduous tree.

Hymenochaete tabacina Fr. On dead branches of deciduous tree.

Hymenochaete rubiginosa. On sticks.

Peniophora incarnata Fr. On dead alder branches.

Peniophora cinerea Fr. On maple twigs.

Coniophora puteana Fr. On bark of decayed hemlock wood.

Aleurodiscus amorphus Fr. On dead branches of the balsam fir; abundant.

HYDNACEAE

Irpex tulipifera Schw. On dead branches of *Prunus serotina*.

Hydnum caput-ursi Fr. On trunks and logs of beech.

Hydnum coralloides Fr. On beech logs. This species is much more branched than the preceding, but seems to run into it.

Hydnum cyathiforme (Schaeff.) Fr. Among moss and twigs under conifers.

Hydnum laciniatum Leers. On a prostrate beech trunk. The very fine branching is a striking character.

Hydnum repandum Fr. On the ground under balsam etc.

Hydnum scrobiculatum Fr. On the ground, under conifers.

Hydnum septentrionale Fr. On living maple trunks.

Asterodon ferruginosum Pat. On much decayed conifer logs. This is referred to by Peck in the North Elba report as *A. setiger* Pk. He originally named it *Hydnochaete setigera* Pk. It occurs also in northern Michigan.

Phlebia centrifuga Karst. On decaying sticks, probably of spruce.

Phlebia merismoides Fr. On coniferous wood.

Phlebia radiata Fr. On beech log.

Phlebia strigoso-zonata Schw. On wood of *Prunus serotina*.

Hypochnus vaga Fr. On decayed wood of yellow birch. This seems to have a number of synonyms. It was found frequently. When sterile it is bounded by radiating orange-yellow strands, while the developing hymenium becomes a gray-drab color. It was probably referred by Peck to *Phlebia vaga*.

Grandinia crustosa Fr. On decayed wood of balsam. Spores oval, hyaline, 5-6 by 4-5 microns.

Grandinia granulosa Fr. On decayed conifer log. The hyphae are dichotomously branched forming irregularly stellate pieces, when crushed under the microscope.

POLYPORACEAE

Boletinus cavipes. On sphagnum and other mosses, under white pine and balsam trees.

Boletinus pictus Pk. In conifer woods, especially hemlock.

Boletus chrysenteron Fr. In open poplar woods, hillsides.

Boletus clintonianus Pk. On sphagnum and other mosses, under spruce and tamarack.

Boletus elbensis Pk. On sphagnum and other mosses, under spruce and tamarack. Certainly a distinct species.

Boletus rubritubifer sp. nov.

Pileus 2-5 cm broad, fleshy, convex, obtuse, glabrous or obscurely substomentose, dry, even, cinnamonrufous (Ridg.), slightly

variegated with yellowish. Flesh whitish tinged yellow, unchanged, very thick. Tubes pompeian red (Ridg.) throughout; mouths red, depressed around the stem, convex, 5–8 mm long, mouths subangular, 2 to a mm, dissepiments rather thick. Stem 5–6 cm long, 1–2 cm thick above, tapering downward, dingy apricot yellow (Ridg.), concolor within, even, glabrous, solid. Odor and taste mild. Spores subfusiform — cylindrical, hyaline or faintly reddish brown under microscope, 9–12 by 4 μ . On the ground under spruce trees, North Elba, September 10.

Strongly marked by the color of the tube layer which is dark red throughout.

Boletus granulatus Fr. On moss, under spruce and pine.

Boletus scaber Fr. The specimens are referable to var. *alutaceus*. Under balsam and spruce.

Boletus subtomentosus Fr. On the margin of conifer woods.

Boletus versipelles Fr. In mixed woods.

Fomes applanatus Fr. On logs and dead trunks of deciduous trees.

Fomes carneus Nees. On spruce logs. Usually thinner and more applanate than *F. roseus*.

Fomes connatus Fr. On dead birch wood.

Fomes fomentarius Fr. On trunks of living and dead birch trees.

Fomes fraxinophilus Pk. On trunk of willow. This is a very unusual host, as this species is almost exclusively found on ash. The young pileus was entirely whitish over the surface and had a distinct fragrant odor.

Fomes igniarius Fr. Frequent on standing beech trunks where the fruit bodies become very large. We also found it on a red maple.

Fomes nigricans Fr. On trunks of white and yellow birch where it is not infrequent. Known from the preceding by its smoother pileus and different shade of color; the incrustation of the surface of the pileus is very thin.

Fomes pinicola Fr. On coniferous wood. Not frequent around Newmans, where hemlock trees are lacking.

Fomes roseus Fr. On decaying logs of pine and spruce.

Fomes scutellatus Schw. On dead trunks and branches of alder.

Polyporus adustus Fr. On dead wood of poplar and other deciduous trees.

Polyporus betulinus Fr. On birch; found only on fallen limbs. Rare in this locality.

Polyporus benzoinus Fr. On conifer logs.

Polyporus chioneus Fr. Common on birch logs and on fallen or dead limbs. *P. albellus* Pk. is considered the same by some authors. Lloyd says it is not the true *P. chioneus* of Fries.

Polyporus circinatus Fr. Under spruce and balsam, on the ground; sometimes intergrown with *Lycopodium* among which it may be growing. The pileus is rarely 15 cm broad, more commonly smaller.

Polyporus elegans Fr. On decaying logs.

Polyporus galactinus Berk. On logs and fallen branches of spruce and on sticks of other wood. This was at first thought to be *P. borealis*, but that species was not discovered in this locality.

Polyporus gilvus Fr. On an alder trunk.

Polyporus glomeratus Pk. On log of some deciduous tree. The greenish color when fresh is distinctive. It is at first resupinate and widely spread and when dry may be passed over as a young *P. adustus*; the greenish color disappears.

Polyporus guttulatus Pk. On some conifer logs and a white pine stump.

Polyporus intybaceus Fr. On stump of tamarack tree. The spores measure 5-6 by 2-3 microns. The specimen had only three pileoli, each 3-5 inches broad, on an extended, connate stipe about 5 inches long. According to Saccardo it is normally very much branched with numerous pilei.

Polyporus nidulans Fr. On wood, probably maple. Infrequent.

Polyporus picipes Fr. Common on decaying logs.

Polyporus pubescens Fr. Common on birch, willow, alder etc.

Polyporus radiatus Fr. On birch; frequent. The pore surface of the fresh plant is mostly smoky gray (Ridg.). Pileus sometimes with a golden yellow margin. *P. aureonitens* Pat. et Pk. is probably the same, as the colors vary considerably even on the same branch.

Polyporus schweinitzii Fr. On white pine and spruce logs and stumps. Frequent.

Polyporus spumeus Fr. On ash logs. This white species is reduced to a small size when dried and then becomes dingy yellowish brown.

Polyporus sulphureus Fr. On trunks and logs of deciduous trees.

Polyporus weinmanni Fr. On decaying conifer logs.

Polystictus hirsutus Fr. On dead wood of deciduous trees.

Polystictus perennis Fr. In open ground or clearings.

Polystictus velutinus Fr. On dead beech limbs. Much like *P. pubescens*, but thinner, more zonate, not so radiately

wrinkled or so markedly imbricate. It is sometimes subresupinate or reflexed.

Polystictus versicolor Fr. On birch and wood of deciduous trees.

Poria attenuata Pk. On poplar wood.

Poria betulina (Murr.) This is *Fomitiporella betulina* Murr. of the N. A. F. It was probably referred by Peck to *Fomes salicinus* Fr. It is frequent on birch. It has much the appearance of *Poria inermis*.

Poria cinerea Schw. On the bark of spruce logs.

Poria ferruginosa Fr. On fallen branches of spruce.

Poria medulae-panis Fr. On decaying logs of birch and beech.

Poria nitida Fr. On wood of some deciduous tree.

Poria prunicola (Murr.). This is *Fomitiporia prunicola* Murr. of the N.A.F. It forms extensive patches on trunks and branches of *Prunus serotina*.

Poria semitincta Pk. On conifer log.

Poria tenuis Schw. On decayed wood.

Poria rufa Schroet. On fallen trunks of spruce where it forms extensive patches. Hymenium is ochraceous — salmon color to mahogany-red (Ridg.), and of a sticky gelatinous nature when fresh; context pure white; adnate, sometimes slightly reflexed. It was referred here by C. G. Lloyd.

Trametes cinnabarina Fr. On dead wood of deciduous trees.

Trametes mollis Fr. On conifer logs. This is said to be *T. cer-vinus* Pers. It becomes smoky-cinereous in age.

Trametes Pini Fr. On spruce logs, often forming extensive resupinate-reflexed sheets. This is the form referred by Peck to *T. abietis*.

Trametes serialis Fr. On under side of conifer logs.

Trametes variiformis Pk. On fallen trunk of white pine.

Daedalea confragosa Fr. On wood of deciduous trees especially white birch of the locality.

Daedalea unicolor Fr. On birch etc. The surface of the fresh pileus is often very pale.

Favolus europaeus Fr. Common on dead limbs and fallen branches, sticks etc. *F. canadensis* seems to be a synonym.

Merulius pulverulentus Fr. On decayed wood. The reticulations are composed of grayish white, thick, convolute ridges.

Merulius subaurantiacus Pk. On dead wood of the balsam fir.

Merulius tremulosus Fr. On birch bark of dead wood.

Lenzites betulina Fr. On decayed wood of deciduous trees.

Lenzites sepiaria Fr. On dead wood of conifers, often where charred by fire.

Solenia anomola Fr. On dead twigs of yellow birch.

CLAVARIACEAE

Clavaria apiculata Fr. On decayed wood. These plants were calla-green (Ridg.) toward base, to pale greenish yellow at tips. Spores 9 by 4 microns, yellowish.

Clavaria asperula Atk. Under spruce and birch trees, on humus.

Clavaria canaliculata Fr. In cedar swamp, among moss and grass.

Clavaria cinerea Fr. On humus and much decayed wood, under balsam and pine. The basidia are 2-spored.

Clavaria cristata Fr. On the ground in conifer forests. Form *minor*, in sense of Patouillard, also occurs.

Clavaria corrugata Karst. On the ground under conifers. Spores 8-9 by 3 microns, slightly yellowish. This has the habit of *C. muscoides*, but spores are elliptical.

Clavaria flaccida Fr. Under conifers, on the ground.

Clavaria flava Fr. The form found, growing among conifer needles, may be referred to as forma *carnicolor*, because of its pale flesh color. The habit and spores are those of the species of frondose woods.

Clavaria inequalis Fr. Under conifers. This is probably the form *C. aurantiaca* Pers. The specimens were golden yellow, sometimes with a longitudinal furrow on the sides.

Clavaria ligula Fr. Growing on beds of spruce needles.

Clavaria muscoides Fr. On mosses, in spruce and balsam forests.

Clavaria platyclada Pk. In conifer or mixed woods. This seems to be a form of *C. fusiformis* Fr.

Clavaria rugosa Fr. On black soil of cedar swamp.

Clavaria stricta Fr. On logs of beech, etc.

Typhula filicina Pk. On stipes and fronds of dead plants of *Pteris aquilina*. Spores 8-10 by 4-5 microns. Sclerotia pale to white, covered by epidermis of host. Stipe often brownish at base. This is apparently Peck's species, although the sclerotia were not exposed.

Physalacria inflata Pk. On rotten log.

AGARICACEAE

LEUCOSPORAE

Amanita flavoconia Atk. Under balsam among mosses. A distinct species and easily separated from *A. frostiana* Pk. by the pulverulent volva. The latter species was not seen at this time.

Amanita muscaria Fr. Stems deeply imbedded in *Polytrichum* moss, under conifers.

Amanita tomentella Kromb. Solitary or scattered in conifer woods. Frequent during the month, apparently autumnal. The spores are spherical.

Amanitopsis strangulata Fr. Under conifers, balsam and spruce. Its pileus is covered with superficial, mouse-gray scales.

Amanitopsis vaginata Roze. On moss and bare ground, mixed woods.

Lepiota acutesquamosa Fr. Under conifers. Found but once.

Lepiota amianthina Fr. On mosses under balsam, spruce and pine. The colors are duller than given for the European plant, more like those of *L. granulosa*. The pileus is scarcely ever umbonate and hence approaches *L. adnatifolia* Pk. The gills are narrowly adnate.

Lepiota cinnabarina Fr. In mixed woods of birch and conifers.

Lepiota clypeolaria Fr. Under balsam and spruce among debris and humus. The creamy-white variety.

Lepiota cristata A. & S. In a hardwood forest.

Lepiota friesii Lasch. In mixed woods of birch, beech and spruce. Known by the abundantly forked gills.

Lepiota granosa Morg. On prostrate, decaying trunks of deciduous trees. Very distinct from related species.

Lepiota granulosa Fr. On mossy ground under conifers.

Lepiota illinita Fr. In mixed woods of pine, spruce and birch.

Lepiota procera Fr. In a clearing on top of a wooded hill.

Lepiota pulveracea Pk. Under balsam in wet swamp. A pale form with creamy-white pileus, adnexed gills and stem squamulose up to the annulus.

Tricholoma flavescens Pk. On decayed wood, in a balsam and spruce swamp.

Tricholoma fumosoluteum Pk. Among mosses under tamarack and balsam trees.

Tricholoma imbricatum Fr. Under conifers. Separated from *T. vaccinum* by its solid stem.

Tricholoma naucoria Murr. On beds of conifer needles. This is *T. fallax* Pk. Its new specific name is well chosen.

Tricholoma personatum Fr. On the ground under leaves. Very infrequent.

Tricholoma resplendens Fr. Under hardwood trees.

Tricholoma rutilans Fr. On decaying stumps and logs.

Tricholoma subacutum *Pk.* Under conifers, frequent. Its spores measure 6-7 by 4 microns., somewhat smaller than those of the European *T. virgatum*. The color of the pileus is pearl-gray (Ridg.). It is also closely related to *T. acre* *Pk.* and *T. murinaceum* *Bull.*

Tricholoma submaculatum *Pk.* On mossy ground under conifers. The stem is subventricose, slightly rooting, usually decumbent. The gills stain yellow.

Tricholoma subrufescens *E. & E.* Under conifers. The plants vary in having shorter stems. This species approaches *T. inodermeum* *Fr.*, but the gills are close and not broad. It has the habit of a large *Inocybe*. Color of pileus and stem is clay to cinnamon-buff. (Ridg.). Spores small, subspheroid.

Tricholoma transmutans *Pk.* Under conifers.

Tricholoma viriditinctum *Pk.* Under spruce and balsam. This is the *T. virescens* of the North Elba Report.

Clitocybe anisearia *Pk.* Among forest debris and humus. Probably to be considered a variety of *C. odora* *Fr.* with narrow, crowded gills. Sometimes no green color is present.

Clitocybe candicans *Fr.* In balsam swamp. The satiny, shining-white pileus is characteristic.

Clitocybe clavipes *Fr.* In mixed woods.

Clitocybe cyathiformis *Fr.* On prostrate trunks of white pine, etc.

Clitocybe decora *Fr.* On decaying spruce logs, etc.

Clitocybe diatreta *Fr.* On deep moss, balsam and spruce swamp. The narrow, crowded gills are Tileul-buff (Ridg.) in color.

Clitocybe ditopoda *Fr.* In mixed woods among fallen leaves.

Clitocybe ectypoides *Pk.* On decaying mossy conifer logs.

Clitocybe gilva *Fr.* Under balsam trees, etc., in low ground, deep in the moss. This seems to be a subalpine species which I have not seen elsewhere.

Clitocybe infundibuliformis *Fr.* In mixed woods of birch, beech, and spruce.

Clitocybe laccata *Fr.* Common in low swampy woods, etc.

Clitocybe media *Pk.* Under conifers. Variable and approaching *C. clavipes* in the shape of the stem.

Clitocybe multiceps *Pk.* On the ground in mixed woods. Much less caespitose than usual in open grassy places.

Clitocybe nebularis *Fr.* In mixed woods.

Clitocybe piceina *Pk.* Under conifers and birch. A toughish plant with gills decurrent on the stem in raised lines.

Clitocybe robusta *Pk.* In mixed woods of birch, beech and spruce. The gills are vinaceous-buff (*Ridg.*) when fresh, becoming army-brown (*Ridg.*) after being dried. The pileus varies from the thick and firm condition of the type.

Clitocybe sinopica *Fr.* On charred soil in woods.

Collybia albiflavida (*Pk.*). On the ground among decaying forest debris. The character of the stem-cortex is more like *Collybia* than *Tricholoma*.

Collybia butyracea *Fr.* Under cedar, balsam and pine. The typical form.

Collybia confluens *Fr.* Among fallen leaves.

Collybia distorta *Fr.* Subcaespitose on conifer stump. The distinguishing characters are the narrow, crowded gills which soon become rufescent-spotted, the compressed subsulcate stem and the chestnut-brown pileus soon fading to cinnamon. Spores 3-4 by 2 microns. Cystidia none.

Collybia dryophila *Fr.* Under white pine and spruce. A variety occurs with stem colored Mars-yellow (*Ridg.*).

Collybia familia *Pk.* On mossy logs, cedar and hemlock swamps.

Collybia maculata *A. & S.* Under pine and balsam.

Collybia stridula *Fr.* Low ground under conifers.

Collybia stipitaria *Fr.* On needles of spruce.

Collybia succosa *Pk.* On decaying wood.

Collybia tuberosa *Fr.* On decayed debris including fungous remains.

Mycena clavicularis *Fr.* On beds of pine needles.

Mycena epipterygia *Fr.* On mossy logs.

Mycena galericulata *Fr.* On decayed wood in cedar swamp. Not noticed elsewhere.

Mycena haematopoda *Fr.* On mossy logs of cedar etc.

Mycena immaculata *Pk.* On mosses and humus.

Mycena leaiana *Berk.* On rotten wood.

Mycena pelianthina *Fr.* In mixed woods of beech and spruce, etc.

Mycena pura *Fr.* Among debris in mixed or conifer woods.

Mycena rorida *Fr.* var. On and among pine and spruce needles. These plants depart from the species in the gills being broadly adnate but not decurrent and in the spore size. The spores are elliptic-ovate, 7-9 by 4-5 microns. According to Ricken, the size of the spores are 10-15 by 4-5, cylindric-lanceolate.

Mycena rubromarginata *Fr.* var. Among forest debris under balsam trees. The specimens found were smaller than the typical form and the edge of the gills were fuscous-brown with scarcely a red

tinge. It differs from *M. denticulata* Pk. and *M. purpureofusca* Pk. in its large spores which measure 10-12 by 6-7 microns.

Mycena vitilis Fr. On moss and black soil in springy places in a cedar swamp. A long-stemmed elegant little species.

Mycena vulgaris Fr. In mixed woods among fallen leaves and conifer needles.

Omphalia albidula Pk. On debris, under balsam.

Omphalia austini Pk. On stump of *Arbor vitae*. This is a small white species with viscid pileus.

Omphalia campanella Fr. On decayed wood of conifers.

Omphalia chrysophylla Fr. On decaying prostrate conifer trunks. Somewhat of the habit and colors of *Clitocybe decora*, but smaller, with more slender cartilaginous stem and spores measuring 10-11 by 4-5 microns.

Omphalia demissa Fr.—Bres. In balsam and spruce swamp. Distinguished among the small species by the large spores, 10-12 by 6-7 microns. The colors are paler than in the typical form, without any purplish tints.

Omphalia fibula Fr. On and among mosses.

Omphalia umbellifera Fr. On decayed wood.

Pleurotus albolanatus (Pk.). (See Agaricaceae of Michigan.) On much decayed birch logs. Separable from *P. porrigens* by the spherical spores and the differentiated upper layer of the pileus. From *Panus angustatus* it is separated by the lack of cystidia.

Pleurotus applicatus Fr. On rotten wood of conifer forests.

Pleurotus circinatus Fr. On decayed logs in spruce woods.

Pleurotus lignatilis Fr. On dead wood of deciduous trees.

Pleurotus mitis Fr. On sticks and debris in woods.

Pleurotus porrigens Fr. On decayed conifer logs and stumps. The margin of the pileus is persistently inrolled.

Pleurotus sapidus Fr. On dead trunks and logs.

Pleurotus serotinus Fr. On mossy logs in mixed woods.

Pleurotus sulfuroides Pk. On conifer logs.

Pleurotus ulmarius Fr. On living maple trunks; associated with *Panus strigosus* B. & C. in one case.

Hygrophorus borealis Pk. On moist ground, mixed woods.

Hygrophorus capreolarius Kalehb. Under balsam and spruce in and among mosses in which the young plants are often completely sunk. On sphagnum the stems attain a length of 8-10 cm.

Hygrophorus ceraceus Fr. On the ground under balsam.

Hygrophorus chlorophanus Fr. Low ground in woods.

Hygrophorus conicus Fr. Among moss in cedar swamp.

Hygrophorus fuscoalbus Fr. Under cedar trees. The typical form.

Hygrophorus miniatus Fr. In moist places, swamps; also *H. cantherellus Schw.*, which I consider only a variety.

Hygrophorus peckii Atk. On mossy ground, under balsam and spruce.

Hygrophorus pudorinus Fr. On mossy ground and among needles of balsam and spruce. This seems to have been referred to *H. queletii Bres.* by Peck in the North Elba Report. (See also Rep't 42.) But the large size and the coloration are those of *H. pudorinus*. The subviscid, separable pellicle seems to belong to both species. Ricken says it occurs exclusively in beech forests, but in Michigan this same species occurs also under hemlocks.

Hygrophorus puniceus Fr. In mixed woods of birch and spruce.

Hygrophorus speciosus Pk. On sphagnum in cedar and tamarack swamp. This seems to be the American form of *H. aureus Fr.* Two color forms occurred in the same locality: the typical form with the orange-vermilion pileus, and a form with pileus distinctly different in color, that is, light cadmium (Ridg.) in the young as well as in the old stages. The typical form had all the characters of the plant common in the sphagnum bogs of Michigan.

Lactarius affinis Fr. In mixed woods of birch and spruce.

Lactarius camphoratus Fr. Under balsam and cedar in swamps.

Lactarius cinereus. On much decayed wood in coniferous forests.

Lactarius circellatus Fr. In mixed open woods.

Lactarius deceptivus Pk. In mixed woods.

Lactarius deliciosus Fr. Under balsam and tamarack in swamp.

Lactarius fuliginosus Fr. Under spruce.

Lactarius griseus Pk. On decayed wood among moss.

Lactarius helvus Fr. On moss, conifer swamps.

Lactarius hyginus Fr. On wet ground under conifers.

Lactarius lignyotus Fr. Under balsam and spruce.

Lactarius oculatus (Pk.) Burling. On the ground under conifers.

Lactarius pyrogalus Fr. In open woods, hillside.

Lactarius rufus Fr. Among moss under balsam.

Lactarius subdulcis Fr. In moist woods and swamps.

Lactarius theiogalus Fr. Under balsam and spruce.

Lactarius torminosus Fr. Under conifers.

Lactarius trivialis Fr. Under balsam, birch etc.

Lactarius turpis Fr. In low ground under conifers. Common; gregarious or subcespitose. This is *L. sordidus* Pk., but seems too close to the European plant.

Lactarius uvidus Fr. In low swampy ground under cedar and balsam.

Russula adusta Fr. Under spruce and pine. A single specimen.

Russula delica Fr. In sandy soil, under conifers.

Russula emetica Fr. Among needles of balsam and spruce in swamps. A form with gills more crowded than is usual in the Michigan plants.

Russula fallax Cke. In wet swamps of cedar etc. on sphagnum.

Russula flava Romell. In conifer woods.

Russula foetens Fr. On the ground in woods.

Russula fragilis Fr. In swamps of conifer trees.

Russula paludosa Britz. Low ground under conifers. One of the largest *Russulae*, the stem sometimes attaining a length of 20 cm. It is frequent in similar habitats in Sweden, where Lindblad named it *R. elation*.

Russula purpurina Q. & S. In cedar swamps.

Russula turci Bres. Under balsam trees. The gills are bright ochraceous-yellowish at maturity. The pileus is smoky-brownish with violaceous, greenish or purplish tints with a blackish disk. Taste is mild.

Russula xerampelina Fr. In conifer woods.

Cantherellus cibarius Fr. Under conifers.

Cantherellus infundibuliformis Fr. Among moss in tamarack and spruce swamp.

Cantherellus umbonatus Fr. On deep sphagnum and other mosses.

Marasmius androsaceus Fr. On fallen balsam needles, twigs etc.

Marasmius capillaris Morg. On fallen beech leaves.

Marasmius cohaerens Fr. On rotten wood in mixed forests.

Marasmius oreades Fr. Roadsides and pastures.

Marasmius prasiosmus Fr. On beds of spruce and balsam.

Marasmius rotula Fr. On dead wood, roots and stumps.

Marasmius siccus Schw. On the ground among fallen leaves in mixed woods of beech, birch and spruce.

Lentinus lepideus Fr. On decaying wood of conifers.

Panus stipticus Fr. On dead branches of alder etc.

Panus strigosus B. & C. On living maple trunks, in one case in company with *Pleurotus ulmarius*, both growing from the

same wound about 8 feet from the ground. Some refer it to *P. laevis* B. & C.

Panus rudis Fr. On stumps of deciduous trees, usually reported as *Lentinus lecontei*.

RHODOSPORAE

Pluteus admirabilis Pk. On mossy logs in woods.

Pluteus cervinus Fr. On stumps of birch etc.

Pluteus granularis Pk. On logs in conifer woods.

Pluteus longistriatus Pk. On decayed log.

Entoloma griseum Pk. Among moss under balsam trees.

Entoloma cyaneum Pk. In mixed woods of pine, spruce and birch. The vinaceous color of the typical plant was almost entirely lacking, but the other characters were normal.

Entoloma rhodopolium Fr. In open woods of spruce, hillsides.

Entoloma salmoneum Pk. On moss and ground in conifer woods.

Entoloma sericatum Britz. In mixed woods. This species has the habit and size of *E. rhodopolium*, but differs in possessing a distinct farinaceous odor and in the narrow gills. The gills are never cinereous. (See Agaricaceae of Michigan.)

Entoloma strictius Pk. In swamps, often about base of stumps.

Clitopilus albogriseus Pk. In mixed woods.

Clitopilus woodianus Pk. In a cedar and birch swamp.

Leptonia asprella Fr. In moist places, cedar and birch swamp.

Leptonia formosa Fr. Under pine in mosses.

Leptonia grisea Pk. In moist places, cedar swamp.

Leptonia lampropoda Fr. On mosses under balsam and spruce.

Nolanea conica Pk. Among mosses in conifer swamps.

Nolanea fuscogrisellus Pk. On mosses under conifers.

Nolanea mammosa Fr. In cedar swamp.

Eccilia mordax Atk. In frondose woods.

Clandopus nidulans Fr. On decayed wood, in birch, beech and spruce forest.

OCHROSPORAE

Paxillus involutus Fr. In conifer woods.

Paxillus rhodoxanthus Schw. On the ground in open conifer hillsides.

Pholiota adiposa Fr. On living beech trunk.

Pholiota aggericola Pk. Among debris on the ground in mixed woods. This was formerly called *P. indecens* and *P. aggerata*. Pk.

Pholiota caperata Fr. Under balsam and spruce.

Pholiota confragosa Fr. On decayed logs.

Pholiota limonella Pk. On and around the base of yellow birch trunks.

Pholiota marginata Fr. On rotten wood.

Pholiota spectabilis Fr. On trunk of living yellow birch tree.

Pholiota squarrosoides Pk. On trunk of living maple tree.

Pholiota lutea Pk. On decaying beech log. Caespitose. It differs from *P. spectabilis* in its darker mature gills which are chestnut-bay color (Ridg.). The stems become fuscous-ferruginous and are clavate at base. Gills narrow. Flesh etc. yellow. The pileus and stem are not squamose nor distinctly viscid and in this respect differ from *P. aurivella* Fr. and *P. limonella* Pk. which are also said to grow on beech. Spores 7-8 by 5-5½ micr.

Hebeloma firmum Fr. Under spruce. Spores 10-12 by 5-6 micr.

Hebeloma longicaudum Fr. On sphagnum, under balsam and spruce.

Inocybe calamistrata Fr. In deep moss under balsam trees.

Inocybe cookei Bres. Under balsam trees etc.

Inocybe excoriata Pk. In mixed woods.

Inocybe geophylla Fr. In cedar swamps etc. on moss.

Inocybe infelix Pk. In open places, roadsides etc.

Inocybe nodulospora Pk. Under spruce and balsam trees.

Spores 7-11 by 6-7 micr. and therefore smaller than those of *I. lanuginosa* (Fr.) Bres. which are said to measure 11-15 by 8-9 micr.

Inocybe subochracea Burt. In moist places in woods.

Inocybe umboninota Pk. In woods.

Inocybe violacea Fr. On the ground under conifer trees. Always distinct and constant.

Flammula alnicola Fr. On decayed wood, in swamps.

Flammula mixta Fr. Among mosses on the ground, under conifers. Known by its large spores, measuring 10-13 by 6-7 micr.

Flammula sapinea Fr. On decayed spruce logs.

Flammula spumosa Fr. On sticks etc. in swamps.

Naucoria semiorbicularis Fr. Roadsides and fields.

Naucoria temulenta Fr. On black soil in conifer swamps.

Galera hypnorum Fr. On mosses.

Galera sphagnorum Fr. On sphagnum.

Crepidotus versutus Fr. On decayed wood.

Cortinarius alboviolaceus Fr. Among debris of forests, under conifers and birch.

Cortinarius alutaceofulvus Britz. On wet, mossy ground in mixed woods. This is a segregate of *C. bivelus* Fr. from which it differs by its spheroid spores which measure $6-6\frac{1}{2}$ by $5-6$ microns.

Cortinarius anomalus Fr. On the ground in hemlock woods.

Cortinarius annulatus Pk. In mixed woods of spruce and birch.

Cortinarius armeniacus Fr. Among moss under spruce etc.

Cortinarius armillatus Fr. In hemlock and beech woods.

Cortinarius catskillensis Pk. Under hemlock and beech.

***Cortinarius chrysolitus* sp. nov.**

Pileus 1.5-4 cm broad, convex then plane, light brownish olive to buffy citrine (Ridg.), unicolorous, densely innately fibrillose-hairy, even, opaque, margin at first incurved then decurved. Flesh concolor, thin on margin. Gills at first chrysolite green (Ridg.), then yellowish cinnamon, adnate, emarginate, rather broad, close, thickish, entire on edge. Stem 7-10 cm long, 3-5 mm thick, slender, equal, stuffed then hollow, brownish olive, concolor within, fibrillose, mycelioid at base and attached to sphagnum. Cortina olivaceous. Spores oval-elliptical, 8-9 by 5-6 microns; roughish. Odor slight, not of radish. Taste mild.

On deep sphagnum in swamp of balsam trees. The species belongs to the subgenus *Dermocybe*. It is related to *C. raphanoides* Fr. but differs in habitat, more slender habit, and lacks the odor and taste of that species. The colors become rather darker as the plant loses moisture.

Cortinarius cinnamomeus Fr. In swamps of cedar, balsam etc. on mosses. A number of its varieties also occurred.

Cortinarius clavicolor Fr. Among fallen needles of spruce and pine. The color of the pileus is raw-sienna to orange-buff (Ridg.). The stem is while silky-fibrillose at first but not at all ringed as in *C. triumphans* Fr.

Cortinarius cylindripes Kauff. In balsam swamp.

Cortinarius deceptivus Kauff. Among debris in conifer woods. The violet to lavender color of the young plant is much deeper than in *C. anomalus* and fades rapidly.

Cortinarius decipiens Fr. Among mosses and sphagnum in balsam and tamarack swamp. A slender plant whose pileus possesses a prominent blackish umbo. The gills soon become Mars-yellow (Ridg.). A variety *minor* occurs.

Cortinarius erugatus Fr. Under conifers.

Cortinarius erythrinus Fr. Under balsam trees on bare soil. Smaller than *C. decipiens*, with violaceous hues at the apex of the slender stem.

Cortinarius evernius Fr. In tamarack and spruce swamp. The stems are often deeply embedded in mosses and may become 15–20 cm long; when fresh they are colored a brilliant lavender-violet, especially toward the base.

Cortinarius flexipes Fr. *minor*. In mosses under spruce trees. One of the prettiest. The pileus is densely covered by grayish white, subagglutinate, fibrillose scales up to the acute umbo.

Cortinarius glabellus Kauff. On the ground in mixed woods.

Cortinarius glandicolor Fr. On the ground in conifer forests after heavy rains. The dark colors of all parts are striking. Easily confused with the stouter forms of *C. uraceus* Fr. It becomes blackish in age or when dried.

Cortinarius gracilis Pk. In sphagnum and other mosses under balsam, tamarack and spruce trees. Much larger than the type. The strict, subcylindrical stems are much elongated, 8–15 cm long. Spores 10–11 by 5–6 microns.

Cortinarius hemitrichus Fr. Attached to mosses and much decayed wood.

Cortinarius herpeticus Fr. Mossy ground, cedar and balsam swamp.

Cortinarius iliopodius Fr. On sphagnum in a swamp of tamarack and spruce. In habit like *C. decipiens*, that is, slender-stemmed and with a conic-campanulate pileus. In color it approaches *C. paleaceus* Fr. Spores 10–12 by 5–6.5 microns.

Cortinarius iodes B. & C. Among mosses under balsam trees.

Cortinarius juberinus Fr. A variety with the apex of the stem violaceous. On deep moss and sphagnum. Spores 7–8 by 5.5–7 microns.

Cortinarius lutescens Pk. On low, moist ground, conifer woods. The olive color is more prominent than in the type.

Cortinarius lilacinus Pk. On mosses under balsam.

Cortinarius mucifluus Fr. In wet places near swamps. Usually referred to *C. collinitus* Fr. which is a very different plant approaching *C. cylindripes* Kauff.

Cortinarius malicorius Fr. On moss in spruce swamps. Habit of *C. semisanguineus*, but with dark green flesh.

Cortinarius paleaceus Fr. In mossy woods.

Cortinarius persicelis *Fr.* On the ground in a cedar swamp. The slender stem is persistently dark grayish lavender. (*Ridg.*) Spores 9-10 by 5-5.5 microns.

Cortinarius pholideus *Fr.* On decayed wood and debris in birch and spruce woods.

Cortinarius plumiger *Fr.* In mixed woods, on the ground. A very distinct species. The pileus is 5-12 cm broad, clothed with a dense tomentose-fibrillose covering. The stem, when fresh, is grayish blue-violet (*Ridg.*) within and without, but this color fades so quickly that it is usually absent. The stem is stout and very fibrillose, sometimes annulate.

Cortinarius pulcher *Pk.* Among mosses, tamarack swamp.

Cortinarius redactus *Britz.* On mosses in conifer swamp.

Cortinarius rigida *Fr.* Among mosses under spruce and pine.

Cortinarius sanguineus *Fr.* Deep in sphagnum, where the stems are often much elongated.

Cortinarius semisanguineus *Fr.* In swamps, on mosses.

Cortinarius subflexipes *Pk.* Under conifers, wet places. One of the smallest species.

Cortinarius spherosporus *Pk.* On mossy ground under conifers.

Cortinarius subpurpurascens *Fr.* Under conifers or bare ground.

Cortinarius triumphans *Fr.* Near the top of a hillside covered with birch and balsam. Probably not before noticed in this country. Its characters are those of the plants I found in Sweden.

Cortinarius uraceus *Fr.* On the ground under balsam and spruce. The plants are blackish after they are dried.

Cortinarius vibratilis *Fr.* On the ground in mixed woods. *C. amarus* *Pk.* is identical.

Cortinarius violaceus *Fr.* On mossy ground, often deeply embedded by the large bulbous stems in thick mosses. Frequent and copious.

MELANOSPORAE

Psalliota abruptibulbus *Pk.* In mixed woods.

Stropharia depilata *Fr.* In mixed woods of birch, beech and spruce.

Stropharia stercoria *Fr.* On dung hills in fields.

Stropharia umbonatenscens *Pk.* On dung hills in woods.

Hypholoma sublateralitium *Fr.* Around stumps in woods.

Coprinus tomentosus *Fr.* Among debris in woods.

GASTEROMYCETES

Geaster saccatus *Fr.* In mixed woods of birch, beech, spruce etc. On the ground among debris.

Bovista plumbea *Pers.* On the ground in pastures.

Bovista pila *B. & C.* In fields.

Bovistella pedicellata (*Pk.*) *Lloyd.* On the ground under balsam.

Lycoperdon atropurpureum *Vitt.* Under spruce.

Lycoperdon glabellum *Pk.* On the ground in spruce and balsam woods.

Lycoperdon pyriforme *Scheff.* On wood, logs, stumps etc.

Lycoperdon gemmatum *Batsch.* On the ground and humus, in balsam forests.

Scleroderma vulgare *Fr.* In open conifer woods, on the ground.

Sphaerobolus carpobolus *L.* On much decayed wood and debris.

Crucibulum vulgare *Tul.* On rotting paper, roadside.

Cyathus stercoreus (*Schr.*) *De Toni.* On old dung hills in fields.

June 1915

CRYPTOGAMIC HERBARIUM

University of Michigan

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The University of the State of New York

New York State Museum

JOHN M. CLARKE, Director

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These reports are made up of the reports of the Director, Geologist, Paleontologist, Botanist and Entomologist, and museum bulletins and memoirs, issued as advance sections of the reports.

Director's annual reports 1904-date.

1904. 138p. 20c.	1910. 280p. il. 42pl. 50c.
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1906. 186p. 41pl. 25c.	1912. 214p. 50pl. 50c.
1907. 212p. 63pl. 50c.	1913. 158p. il. 29pl. 40c.
1908. 234p. 39pl. map. 40c.	1914. 174p. il. 33pt. 45c.
1909. 230p. 41pl. 2 maps, 4 charts.	

Out of print

These reports cover the reports of the State Geologist and of the State Paleontologist. Bound also with the museum reports of which they form a part.

Geologist's annual reports 1881-date. Rep'ts 1, 3-13, 17-date, 8vo; 2, 14-16, 4to. []

In 1898 the paleontologic work of the State was made distinct from the geologic and was reported separately from 1899-1903. The two departments were reunited in 1904, and are now reported in the Director's report.

The annual reports of the original Natural History Survey, 1837-41, are out of print.

Reports 1-4, 1881-84, were published only in separate form. Of the 5th report 4 pages were reprinted in the 39th museum report, and a supplement to the 6th report was included in the 40th museum report. The 7th and subsequent reports are included in the 41st and following museum reports, except that certain lithographic plates in the 11th report (1891) and 13th (1893) are omitted from the 45th and 47th museum reports.

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Paleontologist's annual reports 1899-date.

See first note under Geologist's annual reports.

Bound also with museum reports of which they form a part. Reports for 1899 and 1900 may be had for 20c each. Those for 1901-3 were issued as bulletins. In 1904 combined with the Director's report.

Entomologist's annual reports on the injurious and other insects of the State of New York 1882-date.

Reports 3-20 bound also with museum reports 40-46, 48-58 of which they form a part. Since 1898 these reports have been issued as bulletins. Reports 3-4, 17 are out of print, other reports with prices are:

Report	Price	Report	Price	Report	Price
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5	.25	13	Out of print	23 (" 124)	.75
6	.15	14 (Bul. 23)	.20	24 (" 134)	.35
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9	.25	18 (" 64)	.20	27 (" 155)	.40
10	.35	19 (" 76)	.15	28 (" 165)	.40
		20 (" 97)	.40	29 (" 175)	.45

THE UNIVERSITY OF THE STATE OF NEW YORK

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Botanist's annual reports 1867-date.

Bound also with museum reports 21-date of which they form a part; the first Botanist's report appeared in the 21st museum report and is numbered 21. Reports 21-24, 29, 31-41 were not published separately.

Separate reports for 1871-74, 1876, 1888-98 are out of print. Report for 1899 may be had for 20c; 1900 for 50c. Since 1901 these reports have been issued as bulletins.

Descriptions and illustrations of edible, poisonous and unwholesome fungi of New York have also been published in volumes 1 and 3 of the 48th (1894) museum report and in volume 1 of the 49th (1895), 51st (1897), 52d (1898), 54th (1900), 55th (1901), in volume 4 of the 56th (1902), in volume 2 of the 57th (1903), in volume 4 of the 58th (1904), in volume 2 of the 59th (1905), in volume 1 of the 60th (1906), in volume 2 of the 61st (1907), 62d (1908), 63d (1909), 64th (1910), 65th (1911) reports. The descriptions and illustrations of edible and unwholesome species contained in the 49th, 51st and 52d reports have been revised and rearranged, and, combined with others more recently prepared, constitute Museum Memoir 4.

Museum bulletins 1887-date. 8vo. To advance subscribers, \$2 a year, or \$1 a year for division (1) geology, economic geology, paleontology, mineralogy; 50c each for division (2) general zoology, archeology, miscellaneous, (3) botany, (4) entomology.

Bulletins are grouped in the list on the following pages according to divisions.

The divisions to which bulletins belong are as follows:

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Geology and Paleontology. 14 Kemp, J. F. Geology of Moriah and Westport Townships, Essex Co., N. Y., with notes on the iron mines. 38p. il. 7pl. 2 maps. Sept. 1895. Free.

19 Merrill, F. J. H. Guide to the Study of the Geological Collections of the New York State Museum. 164p. 119pl. map. Nov. 1898. *Out of print.*

21 Kemp, J. F. Geology of the Lake Placid Region. 24p. 1pl. map. Sept. 1898. Free.

34 Cumings, E. R. Lower Silurian System of Eastern Montgomery County; Prosser, C. S. Notes on the Stratigraphy of Mohawk Valley and Saratoga County, N. Y. 74p. 14pl. map. May 1900. 15c.

39 Clarke, J. M.; Simpson, G. B. & Loomis, F. R. Paleontologic Papers 1. 72p. il. 16pl. Oct. 1900. 15c.

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--- Paropsonema cryptophya; a Peculiar Echinoderm from the Intumescens-zone (Portage Beds) of Western New York.

--- Dictyonine Hexactinellid Sponges from the Upper Devonian of New York.

--- The Water Biscuit of Squaw Island, Canandaigua Lake, N. Y.

Simpson, G. B. Preliminary Descriptions of New Genera of Paleozoic Rugose Corals.

Loomis, F. B. Siluric Fungi from Western New York.

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45 Grabau, A. W. Geology and Paleontology of Niagara Falls and Vicinity. 286p. il. 18pl. map. Apr. 1901. 65c; cloth, 90c.

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Contents: Ruedemann, Rudolf. Trenton Conglomerate of Rysedorph Hill.

Clarke, J. M. Limestones of Central and Western New York Interbedded with Bituminous Shales of the Marcellus Stage.

Wood, Elvira. Marcellus Limestones of Lancaster, Erie Co., N. Y.

Clarke, J. M. New Agelacrinites.

--- Value of Amnigenia as an Indicator of Fresh-water Deposits during the Devonian of New York, Ireland and the Rhineland.

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 - 69 ——— Report of the State Paleontologist 1902. 464p. 52pl. 7 maps. Nov. 1903. \$1. cloth.
 - 77 Cushing, H. P. Geology of the Vicinity of Little Falls, Herkimer Co. 98p. il. 15pl. 2 maps. Jan. 1905. 30c.
 - 80 Clarke, J. M. Report of the State Paleontologist 1903. 396p. 29pl. 2 maps. Feb. 1905. 85c. cloth.
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— Map of the State of New York Showing the Location of Quarries of Stone Used for Building and Road Metal. 1897. *Out of print.*

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— Geologic Map of New York. 1901. Scale 5 miles to 1 inch. *In atlas form \$2. Lower Hudson sheet 60c.*

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Geologic maps on the United States Geological Survey topographic base. Scale 1 in. = 1 m. Those marked with an asterisk have also been published separately.

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